Selected Articles from the Long Cane News

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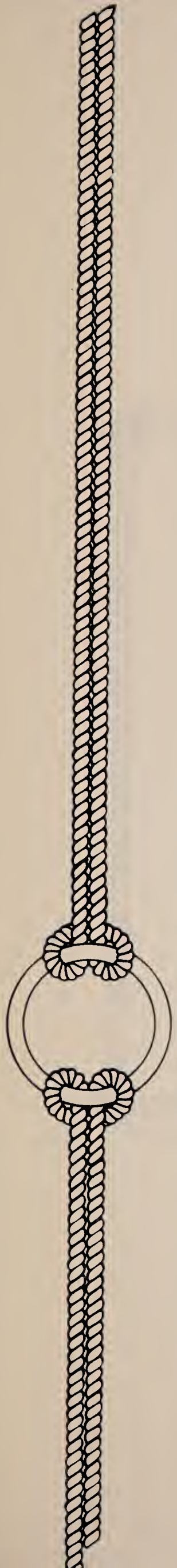

Selected Articles from the Long Cane News

first printing 1976

THANKS TO OUR MANY FRIENDS AT THE SEEING EYE, INC.

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FOREWORD

The Long Cane News originated at Boston College. It is now published alternately between Boston College and Western Michigan University.

It has flourished through the able leadership of Dr. John Eichorn of Boston College and Mr. Donald Blasch of Western Michigan University. Through their unselfish efforts, and the efforts of their staff, the Long Cane News survives.

PREFACE

The Long Cane News has long been a respected vehicle of communication between Orientation & Mobility Specialists. Many would even say it is our major vehicle of communication.

It seems to be a publication with a dual purpose. One purpose seems to be to publish news and notes. This might be a listing of new publications related to our field, job openings, or a listing of recent graduates from one of the training programs.

The second purpose seems to be a forum for disemination of key content information. Each issue usually contains three or four good articles of this nature. These articles have, through the years, reflected a high caliber of professionalism. The content of many of these articles remains relevent today. This fact was brought home to this writer at a recent national convention. Many people asked, "How can we obtain the back issues of the Long Cane News?" This question was asked by two groups of individuals. One group was composed of students just out of Orientation & Mobility Training Programs. They wished to collect key articles and add them to their library. The second group was composed of instructors who had lost or misplaced many of their back issues. The sad fact was that back issues were not available.

I came home from the convention perplexed by the problem. There must be a way to make these articles available. Would it be feasible to reprint all the back issues of the Long Cane News. It was worth a try. I had saved most of my back issues. I "borrowed" the issues I did not have from the files of the Mobility Program at California State University at Los Angeles. I ended up with a pile of material I could barely lift-let alone think of reprinting.

A secon approach seemed to be cut and paste time. Would it become a workable project if only the key articles were gleaned from each issue? The cutting and pasting began. This required some editorial license, but most of past articles were included for re-printing. Some articles were badly dated but were included for their historical significance to the field.

Ms. Betsy Bloom attacked the huge task of retyping all the bits and pieces into a coherent format. She was responsible for typing about 90 percent of the manuscript, and she and the rest of the Bloom family spent many evenings proofreading the copy. Many thanks to them.

But the real tribute goes to the authors of the articles found in the following pages. Their time, effort, and intelligence has left us an important written record. This volume is dedicated to them.

Kent Tyler Wardell

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SPECIFICATIONS FOR THE LONG CANE (TYPHLOCANE)

By

Russell C. Williams

SPECIFICATIONS

I. Materials:

A. All metal parts of this cane shall be fabricated from drawn aluminum tubing having the alloy formula 6061-T6. The chemical composition, mechanical properties and tolerances for this tubing shall be such as to conform to G.S.A. Federal Specifications WWT-700/6B. The nominal dimensions of the tubing shall be:

1. Outside diameter (O.D.) 0.500" (inches)
2. Wall thickness, 0.062" (inches)
3. Inside diameter (I.D.) 0.375" (inches)

B. The grips shall be a standard rubber golf grip of the type known as the "Grip-Rite", manufactured by the Fawick Flexi-Grip Company, Box 111-C, Akron 21, Ohio or its equivalent.

C. The tip shall be made of opaque white nylon rod, nylatron rod or their equivalent.

D. The plastic cap closure for the open end of the crook shall be of suitable white plastic or rubber material.

II. DESIGNS

In general, the long cane shall be designed so as to include a crook, shaft, tip and grip formed in accordance with the specifications outlined below.

A. The Crook: Beginning at a point approximately 3 3/4" from the unthreaded end of the initially straight shaft, the tubing shall be bent to form an arc of 180° on a 1" (one inch) internal radius. The end of the crook shall extend, tangentially to the arc and parallel to the shaft, for a distance of approximately 1/2".

B. The Crook Cap: The open end of the crook shall be fitted with a white plastic or rubber cap to cover any rough edges of the metal tubing. The cap shall be designed with walls of uniform thickness (approximately 0.062" thick) with the covered or closed end having approximately twice the wall thickness.

C. The Shaft: The shaft or body of the long cane shall be the straight section of the cane extending from the arc of the crook to the plastic tip. The tip end of the shaft shall be threaded on the inside for a distance of 8". The threads will be 7/16-20 U.N.F. threads matching those cut on the tip.

D. The Tip: The tip shall be machined from opaque white nylon nylatron or equivalent. The tip shall have an overall length of 3 1/4" and have 7/16-20 U.N.F. threads applied to one end for a length of 1.156". This shall be followed by an undercut of .093" in width and .046" in depth. The unthreaded end shall be ground with a 1/8" chamfer. The diameter of the tip shall be 0.500".

E. The Grip: The grip shall be fitted on the cane so as to extend downward on the shaft from a point 1/4" above the point at which the shaft begins to form the crook. The closed end of the golf grip shall be drilled or cut to provide an adequate hole to permit the application over the crook. The length of the grip shall be reduced to 8 1/2" (inches) beginning at the crook end. All material excess to the 8 1/2" length is to be removed from the end of the grip having the lesser diameter. The grip, cut to appropriate size, will be applied to the cane so that the flat surface lies in the same plane as the crook and faces "outward" for a right-handed user.

F. Length: The length of the long cane shall be measured from the top of the crook to the extreme end of the nylon tip after the cane has been assembled. Generally, only two lengths will be required - 48" and 54". *

* For children or people of unusual height, some revisions may be necessary.

III. WEIGHT

The complete and assembled canes, including the grip, crook, end closure, and nylon tip shall weigh as follows:

A. For the 54" cane - approximately 10 oz.

B. For the 48" cane - approximately 8 oz.

IV. ACCESSORIES

A. Accessories for each completed cane shall include one package of Scotchlite Relective Tape or coating containing one white adhesive strip 2" wide and 36" long, and one red adhesive strip 2" wide and 6" long for covering the shaft of the cane.

B. Each cane will be furnished with one (1) tip as part of the completed cane; and two (2) additional tips as spares.

The Long Canes (Typhlocanes) fitting these specifications are available at the Precision Grinding Company, 8019 Flood Road, Baltimore 22, Maryland. They come in individual cartons. Each carton contains one assembled cane with two spare tips and the unattached scotchlite. The eight inches of thread on both sizes (48" and 54") allows for considerable adjustment in fitting the cane to the individual.

THE LONG CANE

By

George Ossentjuk

(The following story is self explanatory. It was felt that graduates would appreciate reading this type of "testimonial".)

In this novel, "Captain from Castile", Donald Shellabarger is concerned with the character of Hernando Cortes, the daring Spanish conqueror of Mexico. Toward the conclusion of the book he makes the observation that one characteristic differentiated Cortes from his subordinates and made him stand out as their leader: he controlled circumstances while those under him allowed circumstances to control them. With the basic determination, he led a small force against much superior opposition and conquered Mexico for the King of Spain.

All of us have some conquests to make in life. Most of us need not be concerned about the major decisions that affect nations and vast resources, but each one must conquer the problems of his own life so that he can better contribute to the society of which he is a part.

One of the greatest limitations imposed by the lack of vision is said to lie in relating satisfactorily to the environment. Anxiety and fear are common among blind children merely because they cannot move adequately in their surroundings. They do not know what is around them, and they do not have adequate means for the exploration of their surroundings. Even after they become familiar with some particular setting, they cannot generalize the learning which took place in the situation to make proper judgments in a new situation. This is one factor which underlies some of the

nervous mannerisms of blind children. Obviously, parents, friends, and teachers are very helpful in trying to guide blind youngsters in their environment. Gradually a set of techniques are developed which are adequate for the given individual in his own setting. But he is still limited when he must move into unfamiliar territory.

Such was my experience. Some assistance was given through an agency for vocational rehabilitation, which arranged for me to use the cane. Two factors made this less valuable than it might have been. First, the visits of the travel trainer were not long enough or often enough. His brief sessions with me were spent mostly in discussing the function of the cane. Little actual traveling experience was offered. Moreover, the necessary parent counseling was lacking. Therefore, use of the cane was not encouraged by those whose authority I most respected.

There was an expanding life to live, however, and an ever-increasing demand for the successful control of the environment. With meager instruction and determination born of necessity, I began to travel independently. Gradually I gained enough confidence to get where I had to be in the Chicago area, but not without constant fear. I was aware that the techniques I had developed were not the best available.

Upon moving to Kalamazoo, I had the opportunity to observe first-hand the program in orientation and mobility conducted at Western Michigan University. In fact, students with whom I was working were involved in the learning of the most successful techniques--those for which I had longed. Yet it took time to make the decision to seek help. My own feelings had to be examined, and I had to determine to control circumstances. I had to make some admissions to staff members and to students - namely that I needed the training and that I did not fully understand all of the reports students were giving me. To continue to hold the respect of students it was necessary that I go through the same training the students did. In addition, to be able to get about in the new environment of the Kalamazoo area with some degree of independence, I needed support.

In October 1962, I began the course of study which lasted until June 1963. Approximately one hour was devoted to this project four afternoons each week. Some lessons were shorter, and some lasted much more than one hour. The program was entirely individualized, providing practical experience for students under the direct guidance and supervision of the faculty at Western.

My training began with the development of a few techniques for finding direction and walking in a straight line, first following some other person and then walking alone. For this work the gym at the Hillcrest school was chosen since it was in my immediate neighborhood and was an area with which I was unfamiliar. Let me suggest that it is much easier when such training begins early in life, for it is extremely difficult to unlearn techniques which have proved somewhat satisfactory and to accept new ones. My early progress in orientation and mobility was slow and very discouraging. Real determination is required to return to a task day after day, especially when the results are poor. With encouragement and by much practice, necessary pre-cane techniques were learned.

The proper use of the long cane involves the mastery of some fundamental techniques. The right hand must be in the center of the body, with the index finger pointing straight down along the cane. The pivotal action by which the arc is made must be exclusively a wrist movement. The arm must be firmly held in place, but the whole body must be relaxed. The arc must be equidistant from the center on both sides, so as to allow for proper coverage for the entire body. When the left foot steps forward, the cane makes its arc to the right, and when the right foot steps forward, the cane arcs to the left. To unlearn techniques employed with other types of canes and to use new procedures was difficult.

The emphasis in the program of orientation and mobility lay in walking, for it was continually pointed out that theory is of little value without the practice to substantiate it. It was by walking, therefore, that I gained confidence that the cane could help distinguish floor coverings, the height of objects in the environment, and the width and depth of stairs. As I learned these things, my self-confidence improved, and control or conquest of the environment increased. I developed the concept that objects were not merely obstacles to be avoided, but many times proved to be landmarks used in negotiating a given area.

At last foot travel outside began. With it began the adaptation of all the techniques learned indoors to an entirely new set of circumstances. The challenge was increased by the snow which covered Kalamazoo last winter. Snow obscures the differences between streets, sidewalks, parkways, and lawns. A blizzard deadens sound, making familiar areas more difficult to walk through. Gradually I gained confidence. It is this conquest of inner fear which led to gradual control. As my self-confidence increased, the environment for mobility practice was expanded to include walking across busy intersections, locating stores and other buildings, and taking public transportation from one part of the city to another. Each successful task brought additional assurance with which to face the next new situation.

There remained another equally important area for conquest. This was the manner in which one reacts in various social situations. Because the avenue of imitation is cut off by lack of vision, one must be taught modes of behavior socially acceptable in a variety of groups. Since standards of conduct do not remain static and modes of dress change, what once was considered inappropriate in some situations may become perfectly acceptable and even expected. The only way a blind person can be aware of these things is to be told about them.

There are many ways in which I might try to find a chair in a group meeting for example, but the best way really is to ask where is an empty one. There are many situations in which it is far better to request help or accept it graciously rather than to attract unnecessary attention by trying to demonstrate independence outside the actual range of competence. Though it may seen that herein circumstances regulate the behavior of the blind person, I believe that the proper acceptance and understanding of the implications of limitation represent a conquest over the handicap which the limitation might otherwise impose. This, therefore, becomes a control over the circumstances of life-one which leads to a better relationship with others.

Let me hasten to say, however, that I have neither conquered nor controlled my physical environment or social relationships completely. For these things constantly change: all of life will not be sufficient to overcome the problem confronted. As long as there are problems, challenge exists. The tools for meeting the challenges more successfully have been provided, and now it is my task to use them.

I have dealt with this program only in terms of what it meant to me personally. The question arises: Of what value has this training in orientation and mobility for the Kalamazoo public schools which employ me as an itinerant person teaching blind students? Let me explain that ways in which I believe I am a better teacher for having had the training.

First, in proportion as one is satisfied with the life he lives, he can also be effective in the work he does. Insecurity and inadequacy are detrimental to proper attitudes not only in the area most closely related to the source of these feelings but also in the entire sphere of activity.

Secondly, my very function as an itinerant teacher involves getting from one place to another. Whatever method of transportation I choose to use, it is necessary for me to know where I am going and how to get there.

Thirdly, the increased ability to get about freely makes it possible for me to carry on the many personal contacts which are a daily part of my teaching assignment. Students and their parents need support as they grapple with the problems that visual disability presents. At one point during a parent course in Braille and related skills, conducted during the winter of 1963, we spent considerable time discussing the orientation and mobility of the blind. To assist us we arranged for the showing of the film, "The Long Cane", and for a period of discussion with Mr. Stanley Suterko, instructor in orientation and mobility at Western Michigan University. This proved to be one of the most stimulating sessions of the entire course, for it provoked many questions about the problems of day-to-day living with which parents were concerned. A short time thereafter, we had our last meeting at the home of one of the students who lives in my immediate neighborhood. I chose to walk to the meeting instead of asking for a ride. Upon arriving, I could sense taht the parents now saw for themselves that this training they had been hearing so much about was indeed practical and valuable.

Similarly, students need support and guidance. Blind children must be shown how to walk, trailing a wall to find their objective. They need to learn how to protect their faces against bumps and bruises by holding the arm extended and bent at the elbow so that the palm of the hand receives the brunt of the blow when they bump into an object. They must learn to use the objects around them as clues in interpreting their environment. They need to develop a realization that their other senses often provide helpful stimulation to guide them through their surroundings or to tell them where they are. Furthermore, they must know how to walk with a seeing person.

The purpose of all this is to develop independence and self-reliance on the part of each student. But it is not an easy path to success. Many frustrations arise during the period of training. There are times of anger, despair, and disinterest. It is important that the student have someone to whom he can come with his feelings - someone who is sympathetic and understanding but who will not pity. Having discovered that these frustrations and discouragements are very real but that the success which follows is extremely rewarding, I am seeking to provide the understanding and guidance needed. It is my desire to help students see that some of the negative reactions they have are quite normal and must be accepted and overcome as a part of healthy adjustment to their disability.

The blind children in Kalamazoo public schools are only a very small segment of the school population. They work and play with others of their age and grade, sharing the privileges of all the children and accepting the responsibilities involved. So that this may be most effectively done from day to day, the members of our teaching staff are confronted with the additional responsibility of knowing what to expect of the blind children in their classes. These dedicated persons are anxious not to cause difficulty for the blind students and not to teach them poor habits of adjustment.

What features of the physical setting of the classroom should be expecially pointed out to the blind child? Should he be allowed to explore the room when other students are not in attendance? How much student help is needed for him to moves about in the room? Should some adaptations be made in the seating arrangement so that the blind student will b e more comfortable? Does he need help walking to and from the classroom for such activities as music, physical education, and school assembly programs? Always such questions must be answered on the basis of the individual student in the given classroom. To do this, it is my policy to arrange for meetings with classroom teachers at the beginning of each school year and for regular meetings throughout the year. In addition, I observe each classroom and note the behavior of the blind child in the classroom situation.

The increased understanding of the problems of orientation and mobility provides me with far more reserve information to draw upon as I work with other teachers who have specific concerns.

Some time ago I heard a blind psychology professor at one of the leading universities in the East make the statement that most people thought more of him because he could walk to work without help in the morning than for the vast amount of research he had done. He, incidentally, is one of the leading authorities on the development of self-concept among blind adolescents. I think he has judged his community fairly, for it is by the practical demonstration of independence and initiative that one lends credence to the philosophy of educating the blind for total community participation.

From: Michigan Education Journal, May 1964

The following three papers represent the efforts of students in the Orientation and Mobility Refresher Course held at the Connecticut Institute for the Blind, Hartford, Connnecticut, during the month of August, 1964. The course was conducted by Western Michigan University, with the cooperation of the American Association of Instructors of the Blind, and sponsored by the Vocational Rehabilitation Administration, Washington, D.C. It was coordinated by Mr. Donald Blasch, Director of the Blind Rehabilitation Programs at Western Michigan University, Kalamazoo, Michigan. Mr. Lawrence Blaha was the director of the course and he was assisted by a staff composed of Mr. John Malamazian, James Doyle, and William Walkowiak.

The twelve participating students were primarily teachers of blind children in either residential or day school settings. They were divided into committees of four and assigned specific tasks. With the exception of a few editorial changes, this represents the work of the students it is believed to have sufficient merit to be helpful to teachers of Orientation and Mobility.

"BASIC CONCEPTS OF BLIND CHILDREN AS THEY RELATE TO PROBLEMS OF ORIENTATION AND MOBILITY"

One of the problems with which we, as mobility instructors, have been confronted quite often is the lack of concept formations, or highly inaccurate concept formations, in many of the blind children with whom we have worked. The task of instructing these children is made a more arduous one when the mobility instructor is required, for example, to develop concepts of a meaningful and accurate nature in a child of the early teens. Not only is this a learning task, but most often, it is an unlearning task first, and learning task second. The purpose of the report of this Committee is to first submit a workable definition of "concept" and then to point out some areas in which the formalization of concepts may take place prior to the time mobility instruction begins.

First, let us define "concept". Webster defines a concept as being "an idea of what a thing in general should be." Webster also says that a concept is "a mental image of a thing formed by generalizations from particulars." For the purpose of this report, we may work with the second definition, with the following modification. We may consider the "particulars" to be percepts. Our definition would then become, a concept is a mental image of a thing formed by generalizations from percepts. To further define concept, then, we must submit a definition for percepts. Again, to quote Webster, a percept is "an impression of an object obtained solely by the use of the senses." Carl Davis theorizes that a concept is a meaningful organization of percepts. That is to say, that the individual perceives, and by perceiving, forms percepts. These percepts are then amalgamated into a meaningful order to form a concept.

We feel that a more realistic approach must be made by those individuals who will have the most contact with the children prior to the onset of mobility instruction. We feel that blind children need to be permitted to have more experience which will utilize the remaining sensory devices so as to be better able to form more accurate concepts of the world around them. Verbal descriptions from the parents or teachers will not suffice. But, rather, the blind child must be permitted to physically explore the world so as to facilitate differentiation of the physical environment and not be forced to rely soley on auditory cues.

It is felt that a congenitally blind child requires concrete perceptions from which a meaningful concept may be formed, with a tendency noted to learn things first in parts in order to late establish an organized whole.

However, the reverse is found to be true in the case of the adventitously blind child. This child, having had visual experience on which to draw, is able to recall visual images which would aid in the formation of the organized concept. This organized whole can then be broken into tangible parts. It must be remembered, however, that the age at which sight was lost would be operative on the amount of residual visual imagery.

It has been noted by us in our experiences that workers with blind, as well as parents of the blind, too often persist in the use of the mental imagery of the sighted and thus relate to the blind child in a manner which does not permit the child the opportunity to form an accurate concept. Most often this mental imagery is verbalized to the child with the result being an accurate verbal description of environmental situations by the child, but when asked to function kinesthetically in the same environment, the child will make inaccurate movements. This is due to the ambiguity of the child's verbalization which has been made in sighted terms that are not fully understood by the child. To say this another way, an implied conceptualization gathered from a child's verbalization is not always accurate. The child has been exposed to a sighted person's vocabulary which is visually oriented and is, more often than not, meaningless to the child. Cutsforth has referred to this phenomenon as "the verbal unreality of the blind."

In an earlier portion of this report we stated that a more realistic approach should be made by those persons who would have the most contact with the blind child prior to the beginning of formal training in orientation and mobility. You may ask just what persons do we mean specifically, and what is the role of the orientation and mobility instructor, if any, to aid these persons. Orientation is accurately defined as "the process of utilizing the remaining senses in establishing one"s environment." By this definition, we see that orientation is a never-ending process. Obviously, it begins when the child is born and continues in some form or another for as long as the person lives. Logically then, the persons with whom the blind child will have the most contact prior to mobility instruction will be the parents, parental substitutes, and teachers. It is the feeling of this committee that these persons may aid the blind child most effectively in the formation of accurate and meaningful conceptual patterns. It may fall upon the mobility instructor to aid these persons from time to time in the role of a consultant. Ideally, the parents should find it possible to avail themselves of several forms of professional help and consultation. One form of professional consultation available to them should be an orientation and mobility specialist. Likewise, the teacher in the residential school for the blind, the houseparent of the residential school, the classroom teacher in the resource room of the day school, and the itinerant teacher all should receive the benefits of the knowledge possessed by the orientation and mobility instructor so that these persons may plan and practice methods of instruction which will lead to concept formation by the child and prove to be of benefit to the child when formal orientation and mobility instruction begins.

If we accept the premise that orientation is a never-ending process which begins with the birth of the child, then logically, the persons who must begin the process of concept forming are the parents. There are several methods available to the parents which may aid toward this end. The so-called normal seeing child is permitted and actively encouraged to explore the environment, yet too often this developmental process is denied the blind child. Several authoritative sources have theorized

the cause to be related to parental fears for the blind child which are, in fact, the projection of parental fears as imagined if they, the parents, were blind. The gradual increase of awareness of the environment which is encouraged in the sighted child must not be denied the blind child. The sighted child becomes increasingly aware of the life around him as the degree of effectiveness of vision increases. The blind child may only become more aware of the environment by sensory and verbal interpretation. The process of encouragement of tactile exploration may begin while the child is still in the crib stage using toys possessing auditory and tactual stimulation. The child should also be permitted freedom of movement in this early stage so that an accurate assessment of the body, its capabilities and limitations, may begin from the earliest stage and be continued as the maturation process continues. As the sighted child's environment and knowledge of the environment is widened, so too should the blind child's environment be widened. From the crib the child will move to the play-pen. Here, again for example, toys may be used to stimulate the child's active role in movement and exploration. From the play-pen the child will move to the floors of various rooms of the house. At this time the parents may use toys which may be rolled and which will give off auditory signals for the child to locate and retrieve. This may prove to be valuable in later life as the mobility instructor works into areas of sound localization. The child, while being permitted to crawl on the floors of the rooms, is in the position of receiving the first introduction to orientation to objects and furniture in the rooms. As a natural sequence, the child will then be moved outdoors as weather permits so that orientation to the outside world may begin. From the yard, and as the chronological age increases, the child will move into areas in the neighborhood and the community. The parents' role during these stages must be one of encouragement and interpretation of the surroundings. They physical reality of the world may be explained to the child as the child experiences new facet of the areas. Such concepts as driveways, garages, parking strips, trees, signs, mail boxes, to name a few, are real physical things to which the child may be introduced.

Accompanying the physical maturation of the child, there must be a maturing of the social being. The parents must be honest with the child as to the limitations and potentials of the child. These must not be the imagined measurements of the parents but realistic ones which may be engendered by the use of consultative agencies. The child must be corrected in the same manner as are the contemporaries of his age group. The child must be given daily tasks and responsibilities in the home just as are the siblings and the playmates. This will aid the child in becoming familiarized with his role, give experiences in interaction of groups, and aid in the familiarization to particular areas of the home. The idea that a blind child is able to do several things well is also served in this type of activity.

Another beneficial aspect which may result from the above-mentioned pattern of parental guidance is that, by permitting the blind child to explore the physical world and make it meaningful, a pattern may be established in which the child is not satisfied to just let the world exist about him, but actually becomes curious about the unknown physical monstrosity in which he exists. It has been noted by several leading workers with the blind, and we have all noted the same tendency, that the curiosity of the blind child is easily sated. Being unable to receive visual stimulation, the blind child is often content to being incurious about his surroundings unless they have a direct bearing on his own person. Encouragement in the practice of seeking knowledge, investigating, identifying, and interpreting real life situations at an early age will make the instruction process for the persons who will be working with the child at a later date easier and much more meaningful to the child.

Now the child is ready to progress to the more formal learning situations which are found in the school setting. The work which has been done by the parents in the home will now be done by the classroom teachers and the houseparents in the residential school milieu by the resource teachers in the integrated school program as well as other classroom teachers; and perhaps by the itinerant teacher in the home setting. All of these people should be prepared to continue the concept formation pattern which has begun in the home.

Before we may expect these individuals to aid the orientation and mobility instructor by continuing this training, these persons should receive some forms of inservice training so that everyone is using the same language, so to speak. They must be appraised of the best methods of familiarization and orientation to classrooms, hallways, and the yard. They must know that familiarity with such concepts as north, south, east, and west, for example, can be worked into not only the actual familiarization with the school itself, but that these, and other similiar concepts, lend well to the actual classroom learning situations.

The teachers who are working with the blind must utilize that same procedures as those utilized by the parents, i.e. they must permit tactile exploration followed by verbal description and interpretation, or vice versa.

A diversified physical training program should be offered so that the concept of the body and its limitations may take place. Competitive sports activities which consider at all times the theory of the "success pattern" should be encouraged so that the blind child is able to attain some form of physical and muscular toning as well as some form of status rank with the peer group. It should also be remembered that sports activities have incorporated within them several forms of concept formalizations which will reinforce concepts introduced in other areas. For example, wrestling aids in the formalizing of concepts concerning the body structure. These are not the only reasons for the inclusion of these and other sports activities but were used only to cite the advantages inherent in these activities.

In the school, the pattern of assigning daily tasks and responsibilities to the blind child may become even more sophisticated. For some, this may be the first opportunity to receive group experiences and responsibilities. The teacher must be realistic in the appraisal of what types of responsibilities to assign the blind child but must not be hesitant to require the blind child to become active in this type of assignment. Also, the houseparent in the residential school must require from the child the same type of active role in that particular setting.

Those working with the blind children, particularly in classroom situations, must be instrumental in the encouragement of helping the child be curious, and eager to explore not only the formalized textbook learning program but also the reality of the physical world. The possibilities for incorporating this in the formal learning situation are almost ad infinitum.

Those persons involved in the school situation must also follow up what the parents have started in the realm of corrective measure. The blind child must not be permitted to do something which may be considered socially inappropriate, with the teacher rationalizing that the child is blind and does not know better. It is the job of all who work with the blind, particularly in the child's early stages, to serve as a social thermometer. The corrective measures employed, however, should be fair, realistic, and meaningful for the child.

These, then, are some of the ways in which we feel that more meaningful and accurate conceptual formations may be introduced to the blind child. We also feel that their inclusion in the child's developmental process will not only have a positive carry-over into the mobility instruction program, but also in all new learning situations in which the child, and later the adult, will embark. We feel that the acquisition of more sophisticated concepts cannot accrue unless the more basic concepts which we have discussed have been introduced and assimilated by the child.

PRESENTING AN ORIENTATION AND MOBILITY PROGRAM

TO THE ADMINISTRATION

I. Justification of an Orientation and Mobility program:

The basic need is to make the blind person as independent as his ability will allow him to become in his own environment.

A. Concepts
   1. To help him build a better body image of himself;
   2. To relate to his ever-expanding environment;
   3. Organization and interpretation experience developed in Orientation and Mobility has a positive carry-over or relationship to other learning situations.

B. Psychological Values
   1. To feel that one is accepted by society and his peers through good Orientation and Mobility Skills;
   2. Experiencing satisfactions of overcoming immobility;
   3. It builds self-confidence and self pride (ego uplift).

C. Physical Values: Development of better body mechanics.
   1. Coordination;
   2. Reaction;
   3. Stamina;
   4. Agility;
   5. Posture and Appearance;
   6. Develops the use of the other senses.

D. Social Values
   1. Acceptance by and adjustment to one's peer group;
   2. To be able to take an active part in society through practice of Orientation and Mobility.

E. Economic Values
   1. It allows him to travel to and from his job and/or school with the minimum aid from the sighted;
   2. A well-adjusted Orientation and Mobility trained person can get a job more readily;
   3. It gives him a better chance of retaining employment;
   4. This in turn will aid in the blind person's effectiveness to earn a means of livelihood.

F. Public Opinion and Acceptance
   1. A student well trained in Orientation and Mobility gets admiration and acceptance rather than pity from the seeing public;
   2. Helps to educate the public in what he, a competent blind person, can do.

II. The Organization and Planning of an Orientation and Mobility Program

A. Personnel and Staff

Presenting an Orientation and Mobility Program

   1. Ideally, this Orientation and Mobility program should be conducted by a full-time Orientation and Mobility specialist;
   2. This too should be a staff effort through teamwork led by the Orientation and Mobility specialist.

B. Time
   1. Orientation and Mobility classes should be scheduled as a regular school subject;
   2. The student should not be taken out from another class for this instruction;
   3. Each student that is enrolled in this class should be taken for one class per day, five days per week because:
      a. Development of a better success pattern;
      b. Better retention of knowledge;
      c. Degree of competency and proficiency can be achieved more readily, therefore a better quality and quantity can be attained during the school term.
   4. There must be a one to one ratio (instructor-student) because:
      a. Safety factor;
      b. To provide for closer supervision in developing techniques and skills;
      c. To provide knowledge of why an individual reacts in a certain way in a specific situation permitting:
         (1) Instructor to apply proper remedial procedures;
         (2) Instructor to provide for individual differences.

C. Facilities
   1. Natural facilities in the blind person's environment;
   2. Increase his sphere of operation in which he can successfully function.

D. Cost
   1. The salary of the Orientation and Mobility specialist is the primary cost of this program;
   2. Equipment;
      a. Canes and accessories;
      b. Materials for models.
   3. Travel expenses;
      a. Incidental items such as bus fares, etc.

E. Parent Education and Cooperation
   1. Show film of techniques and skills;
   2. Demonstration and observation of the techniques and skills;
   3. Correspondence about needs and values of Orientation and Mobility;
   4. Progress report on students.

F. Staff Enlistment
   1. The Orientation and Mobility person should work with the principal in the in-service training;
   2. Present needs and values to all the staff;
   3. Present proper techniques and skills (demonstrate);
   4. Orient teachers and house parents to basic Orientation and Mobility skills;
   5. Realization that the Orientation and Mobility program must be a team effort;
   6. Evaluation and re-evaluation of program at appropriate times.

G. Basic familiarization to all students to present environment.
   1. When student first arrives on campus;
   2. Living quarters;
   3. School;
   4. Campus.

H. Orientation in basic skills
   1. Start as early as possible (teacher's responsibility if in-service program is effective);
   2. Selection of students must be according to the discretion of the instructor as he sees the Orientation and Mobility needs;
   3. Place of instruction should take place in the child's immediate environment;
   4. Scheduling and instruction should be in conjunction and cooperation with the instructor and staff;
   5. List of basic skills.
      a. Sighted Guide (Use of);
      b. Hand and Forearm across the Body;
      c. Use of the other hand and arm for lower objects;
      d. Locating dropped articles;
      e. Handshaking;
      f. Trailing;
      g. Familiarization of classroom;
      h. Squaring Off and Direction Taking;
      i. Instruction with these basic skills in the classroom and adjacent corridors.

I. Provide experiences to gain competency of Basic Skills in school environments.

J. Review of Basic Skills.

K. Instrument skills for mobility (cane) at Junior High School or when his level of physical growth and maturity indicate a readiness.
   1. Cane techniques.
      a. Diagonal and across the body;
      b. Touch techniques;
      c. Ascending and descending steps;
      d. Touch and drag;
      e. Following guide line;
      f. Touch and slide;
      g. Crossing streets.

L. Mobilization with instrument
   1. Local environment (indoors and out);
   2. Residential area;
   3. Public transportation;
   4. Small business areas;
   5. Congested business areas.

ORIENTATION AND MOBILITY IN-SERVICE TRAINING PROGRAM

INTRODUCTION

A GOOD Orientation and Mobility program means more than merely employing an Orientation and Mobility teacher. If such a program is to be successful, administrators, teachers, houseparents, parents, and others influencing the lives of blind children must assume an active role. In-service training is a beginning.

Objectives of the program:

1. To develop an awareness of what might realistically be expected of a blind person.
2. To teach basic skills in orientation and mobility.
3. To give personnel sufficient knowledge and skill for assisting in and reinforcing the total orientation and mobility program.

Who should receive in-service training, and to what extent?

All persons having direct contact with the children should have some in-service training. The person planning this program should examine the roles of the individuals and determine the amount and content of training needed.

1. Superintendent: If time permits, the superintendent should receive the same training as teachers and principals. However, a minimum amount of training should include use of the sighted guide. Present him with a copy of the course of study.
2. Principals and teachers: These persons need to know all the basic skills and have knowledge in developing basic concepts necessary in orientation and mobility.
3. Houseparents: These persons need to know all the basic skills and understand what the cane can do. Although Orientation and Mobility is closely related to the activities of daily living, it is felt that this in-service training program should be limited to Orientation and Mobility and leave the teaching of daily living skills to one more knowledgeable in this area.
4. Maintenance people, secretaries, and volunteer groups which come into the school (for reading, recreation, etc.): These persons need to know the use of the sighted guide and how to give good directions to a blind person. Demonstrations and explanations of other basic skills should also be included.
5. Parents: Parents must be reached to the extent that they will allow the child to do what he is capable of doing when he is at home. A minimum amount of training should include use of the sighted guide and knowledge for developing basic concepts in Orientation and Mobility.

Who should provide the training?

The training should be provided by the Orientation and Mobility instructor. Time and opportunity permitting, key resource persons can supplement his efforts.

How can it be scheduled:

1. Limit any training group to a maximum of eight persons.
2. If possible, mix sighted and blind staff in each training group.
3. Do not mix teachers and houseparents in a training group.
4. Allow each person to participate blindfolded so he will fully understand each technique.
5. Preferably, schedule teachers during the school day, but not during class time; if this is not possible, plan after school meetings, giving teachers plenty of advanced notice.
6. Each group should meet at least once a week.
7. Preferably, schedule houseparents during morning hours or at a time when children are taken for extra curricular activities.
8. Parents are difficult to reach. Some suggestions are: A. Have the orientor go to the home of the blind child. B. Hold workshops for parents at the school. C. Hold regional meetings for parents in different areas of the state.
9. The orientor should continue to work with the staff throughout the year, keeping lines of communication open with staff.

LESSON GUIDES FOR IN-SERVICE TRAINING PROGRAM

Lesson I. Use of the-Sighted Guide

Objective: Fast, efficient travel from one area to another when a sighted guide is available. Encourage blind person to be active, not passive.

1. Grip and position -- ½-pace.
2. Experienced sighted guide gives signal to blind by contact of hand or arm.
3. Regular and narrow corridors. (Buses, trains, etc.)
4. Doorways: opening to the left or the right -- blind person can should assist when going through a door.
5. Stairways: ascending and descending.
6. Curbs -- (round) Guide approaches at perpendicular.
7. Theater and auditorium aisles.
8. Approaching seats and chairs. (Practice sitting)
9. Emphasis on the blind person using initiative to use the sighted guide. Can use him as a protective measure.
10. Leaving a blind person in open space.
11. Moving through congestion and very narrow openings.
12. Exceptions to following ½-pace behind guide, and practice with same.
13. Control of situation by blind person.
14. Getting in and out of cars.

Lesson 2. Hand and forearm across the body

Objective: To enable a blind person to move about in a familiar area with ease and safety.

The forearm and upper arm are held parallel to the floor. The forearm forms an obtuse angle with the upper arm. The fingers are to be extended, but relaxed and the palm faces in the direction one is traveling. Practice employing one arm, then the other one.

A. Use of opposite hand and arm for added protection.
B. Locating dropped articles: (pinpoint the sound)
    1. Stooping (protective measure)
    2. Squatting
        a. Use of hand and arm to clear path.
        b. In seeking the dropped articles:
            (1) Circular pattern
            (2) Square pattern
                (a) Horizontal
                (b) Vertical
C. Shaking hands -- modified hand and forearm across body technique.
    1. Two blind people -- use back of hand and forearm diagonally across the body.
    2. With sighted people -- move back of hand forward slightly and turn to shaking position. Let sighted person complete procedure.

Lesson 3. Trailing

Definition: The act of using the back of the fingers or fingernails to follow lightly over a straight surface such as walls, lockers, desks, tables, etc. for the following reasons:

A. To determine one's place in space.
B. To locate specific objectives.
C. To get a parallel line of travel.

Lesson 4. Familiarization, Squaring Off, and Direction Taking

A. Familiarization of a room.
B. Squaring off: The act of aligning and positioning one's body in relation to an object for the purpose of establishing a definite position in the environment and in preparation for getting a line of direction. (Practice)

C. Direction taking: The act of getting a square line or course from an object or sound to better facilitate traveling in a straight line toward an objective. (Practice)
   1. Explain establishing a success pattern by illustrating with the selection of short distances first.
   2. Feet slightly apart, select and fix an imaginary point.
   3. Slight lean forward, exaggerated first step.
   4. Use hand and forearm across the body technique.
   5. Alternate above using other arm and hand for low objects.
   6. Reaching for objectives. One step short of the objective, extend the back of the hand and fingers to contact object.

Lesson 5. Developing Proper Concepts

1. Right and left.
2. Forward and backward.
3. Up and down.
4. Straight and curved.
5. Turns:
   a. Right turn
   b. Left turn
   c. About face
   d. 45 degree turn
   e. 360 degree turn
6. Compass directions (north, south, east, and west.)
7. High and low.
8. Vertical and horizontal.
9. Parallel.
10. Perpendicular.
11. Flat and slanted.
12. Narrow and wide.
13. Bumpy and smooth.
14. Sounds:
   a. Identification
   b. Localization
15. Shapes (circle, rectangle, square, triangle)

Lesson 6. Demonstration and Explanation of Cane Techniques

EVALUATING THE PROGRAM

Evaluation comes with trained observation and cannot be done much before the program has been in effect for about two years.
Look for the following:

1. Do students become easier to work with?
2. Do teachers and houseparents go to the orientor to discuss problems involving Orientation and Mobility?
3. Are teachers and houseparents changing to improved methods in giving students directions for moving from one place to another?
4. Are students showing proficient use of basic skills?
5. Are students improving their posture and gait?

STRESS IN THE REHABILITATION PROCESS

By

Leo H. Riley M.D.

Dr. Leo H. Riley reports that the American Center for Research in Blindness and Rehabilitation has attempted to obtain some objective measures of the stress in the rehabilitation process. The following is a brief summary of one phase of the project.

During the month of January, 1965, telemetered electrocardiograms of six male subjects who were trainees at St. Paul's Rehabilitation Center were studied. The following chart indicates their ages and the causes of the subject's blindness;

1. 51 years Retinitis Pigmentosis
2. 23 years Trauma
3. 35 years Retrobular Neuritis
4. 54 years Diabetic Retinopathy
5. 58 years Trauma
6. 31 years Diabetic Retinopathy

Although not all subjects were measured in every area the situations included were; (1) Braille, in a braille classroom setting; (2) Mobility in an unfamiliar indoor situation; (3) Shop in a familiar situation involving the use of five power tools by each trainee; (4) Videation indoors using both familiar as well as unfamiliar objects; (5) Mobility in a familiar outdoor situation.

The equipment used was a custom built physiological telemetry system borrowed from the Crew System Division, Spacecraft Center, National Aeronautics and Space Administration. It included two two-channel chart recorder with an event marker.

Each subject received an explanation of the procedure before he entered his first situation. He was told to do whatever he would have done naturally in each situation, and to ignore the telemetering equipment. Later interviews with the subjects indicated that they were generally successful in complying with these instructions. The braille and videation instructors ran their regularly scheduled sessions just as if no telemetering were being done. The shop session which was studied was developed by the shop instructor expecially for the purpose of the telemetry session. He decided to have each subject use four separate power-driven woodworking tools; a radical saw, a bench saw, a belt sander and a drill press. Two subjects also used a bandsaw.

The mobility situations were not a regular part of the rehabilitation program. Due to the limited range of the available telemetering equipment, it was necessary to arrange mobility exercises reasonably close to the telemetry receiver. For the indoor situation, a large hall was used with which the subjects were not familiar, and for the outdoor situation, a familiar area had to be used, located between the rehabilitation and research buildings. A mobility instructor was present during the indoor situation, but not during the outdoor situation.

The data were searched for significant changes which might be related to events which were known to have occurred during each test situation. These events had been encoded on the record by the investigator during the actual study of each situation.

Although the numbers involved in this brief study were far too small to even hope for statistical significance in the results, detailed findings indicated that obvious changes did occur in heart rate as weal as in electrocardiographic contours, and these changes could be correlated with situations which seemed at the time capable of producing stress reactions. No effort was made to interpret the preliminary study, the goal of which was to provide experience in telemetry and to demonstrate satisfactorily that the telemetered electrocardiograph was an adequate and feasible method of measure for the current purposes when combined with clinical observation and subjective feed-back from the research subjects.

RESIDENTIAL SCHOOL MOBILITY
The Lower School

By

Katherine M. Reilly

Margery Cutsforth in her article "The Preschool Blind Child at Home" states "the way a child thinks about himself will determine how he meets a new experience - whether he feels strong or weak, whether he anticipates success or defeat, whether he expects love or toleration or indifference or opposition, whether he feels curious and free to explore, or anxious and fearful, and ready to

withdraw. These things are the fabric of personality, already pretty well established when he comes to you with a definition of himself." [1] A mobility teacher in a residential school is especially concerned with this "definition of himself." For the specialist finds much of the success or failure of the student is based on his belief in his ability to get around the school safely and comfortably.

Teaching mobility to young people in a residential school offers a unique situation. For not only does the teacher meet with his student at regularly scheduled intervals for formal lessons but he also has access to the student for informal observation during the entire daily routine of the student. Not only can the student be observed during unguarded moments but also the teacher can easily contact all other personnel who deal with the child in the course of his daily existence. This is extremely important when one considers what the true definition of mobility is.

A mobility specialist is concerned with all movement. From the time one gets out of bed in the morning until one returns at night, there is movement. There is an incorrect and correct way to move. Not all movement necessarily involves any serious danger to the individual, but certainly there are the elements of appearance and self confidence within the person. These obviously are important in the "definition of self."

The mobility course of studies in the upper grades (junior and senior high schools) is primarily concerned with the more obvious aspects of independent travel, namely, cane techniques and related matters. This is not to say, however, that other aspects of personal mobility are not handled. Quite the contrary. For no matter how competent the student might be with the mechanics of the cane, if he does not enjoy and have confidence in himself in the smaller routine matters of mobility, then he is not going to travel extensively. However, the primary concern here is mobility in the lower or grammer school grades. So let us examine a lower school program.

As previously mentioned, the residential school teacher has the unique experience of being able to observe his student in his total daily environment. Not only that, but all personnel directly involved are readily available for contact. This is extremely important for a successful mobility program for a youngster. For if an observation is made by the specialist, a correction is formally taught in class, and then reinforcement of this is lost, the lesson too is lost. For many a student can perform beautifully under guidance and direction and then fail to make the carry-over into daily living of just how this new method fits into his pattern of existence. For a mobility teacher this is disastrous. For much of the training directed especially at this age has the aim of creating good and permanent habits. A habit is not practiced and learned just in one or two sessions a week. Constant repitition and reinforcement are musts. This then points out a very necessary and important part of the mobility teachers program - faculty education. The mobility specialist must continually meet with and inform and instruct all personnel who come in contact with the children. They must fully understand just what are good mobility habits not permit the children to develop or practice bad ones. For it is far more difficult to break a bad habit than to teach and create good ones from the beginning (consider the difficulty of trying to change habits that have been allowed to continue for 15, 18, 20 years). For example, just such simple habits as bending over (to tie a shoe, pick something up, etc.) should be taught correctly from the start. A blind child should never bend over from the waist thrusting his head forward, since he cannot see what is out in front of him, he leaves himself wide open for a nasty bang. Further, the head is perhaps the easiest part of the body to injure seriously since it is the least protected by fatty tissue. So why lead with it! Rather the child should be taught as a natural move to bend from knees keeping the back and head erect. If one must bend forward a simple extension of the arm (parallel to the floor and elbow at a right angle) across the front of the face can protect the head as one goes down. Or another example, going up and down the stairs with or without the railing. A blind child of normal physical capabilities should learn just as the sighted child when each is big and old enough how to put one foot in front of the other when traveling the stairs.

Another extremely important aspect of lower school training is the development of good basic walking and postural habits. If, obviously, there is any gross divergence from the normal, a physical therapist should be contacted. However, if it is just a case of poor habits beginning to develop due to lack of sight, this can be corrected by the mobility teacher. Preferably these good habits will be pointed out to the student and incouraged before the bad ones get a chance to develop.

[1] Margery Cutsforth, "The Preschool Blind Child at Home", Exceptional Children, October, 1957; Vol. 24#2, pp. 58-66.

The above mentioned examples are just a few of the obvious techniques a teacher might be concerned with at the young level. However, the over-all concern of the mobility teacher in his course is that the individual knows himself. The young child must know his own body and what it is capable and incapable of doing. Further, he must feel confident in his ability to understand and control it. Only after he understands this within himself will he begin to be able to relate it to his manipulation in this outside context. Since the very important element of sight has been lost, the avenues of learning provided by this sense have also been lost. This eliminates one particularly necessary area of learning for the child at this stage of his life. This is imitation. So very much that is learned in the formative years develops from sighted imitation. This must be taught the blind child. Much of what we as sighted adults have learned, we learned not through formal teaching but just sighted copying. This can be very easily overlooked as one gets annoyed with the blind child as he develops his own ways of doing things. Yet how one learned to do this is often overlooked.

In conclusion, may I say that as a teacher of mobility in a residential school, I feel it is quite necessary that a blind child first learns to understand himself socially as well as physically before he can begin to learn to manipulate himself comfortably and successfully in his environment. Only after this is well underway can a teacher begin to expose his student to the lessons he must learn because he is blind. The formal teaching of orientation and mobility, using a guide, community, and traffic concepts, self-protection and coordination, and other specific techniques can be successfully learned, accepted and applied so that the blind person can independently move about safely with a great deal of personal satisfaction and enjoyment.

A STUDY ON THE USE OF OCCLUDERS WITH PARTIALLY SIGHTED

In 1964-1965 three Boston College students, Andrew Withrow, Rene Paquin, and Wilma (Spake) Seelye, conducted an experiment as part of the course "Human Senses: Their Nature and Training" in which they attempted to determine whether a partially sighted, legally blind person can learn mobility more effectively under intermittent total occlusion rather than under total occlusion.

The experimentors selected six normally sighted students for the experiment. Legal blindness (peripheral vision only) was assimulated by the use of special glasses develped by the Polaroid Company.

One group was totally occluded for 16 of their total 18 lessons. The other group was occluded for 8 lessons, then fitted with the special glasses for 4 lessons, then occluded again for 4 lessons. It should be noted that no new skills were taught to the group with the special glasses during lessons 9 - 12. At the end of this time both groups were tested wearing the special glasses.

The progress of both groups was evaluated by a Boston College staff member. This instructor had no knowledge of which students were in either the control or experimental groups. Participants were evaluated on their touch technique and general travel ability.

The results revealed that the intermittently occluded group learned mobility skills more effectively than the totally occluded group. The experimental group's performance was better on the technical use of the can such as grip, arm position, wrist motion, rhythm, etc. Also, they showed better skills while traveling in a residential area. This proved to be true also in their approaches to curbs, establishing directions to cross, selecting times to cross and locating and clearing opposite curbs.

The authors suggested that this experiment should be repeated with possible consideration as to the use of a different method of similating partial vision and the use of one teacher in all situations.

THE RESOURCE TEACHERS WELCOME THE O&M MEN

We are most happy to welcome into our rather limited ranks the Orientation and Mobility Men. We have long looked forward to some kind of help, because we have long known that there was a great need. We ourselves have tried, within our limitations, to meet the needs of blind children in Public Schools. Sometimes we have been surprisingly successful, sometimes we have failed miserably. Always we have known that we needed help, wished for help and now it looks as if we may get the help. We sincerely hope so.

As we have listened to you in workshops, and when occasionally a voice was raised with "yes, but in this situation .." we were pleased with your sureness, your positive answer. Perhaps we should have said "wistfully pleased". We, who have paved the way for you in public education systems, have so often thought that we had the answers, and so often we have learned that our answers were not the Administration's, the parents', or the child's answers. We have learned to file away the "complete solution" with the hope that some day we may salvage some of the bright thought.

Your employment in a public school system has changed your status just a little. You are now a public school teacher who has specialized, majored if you will, in Orientation and Mobility and/or Peripatology. Now you are in the same position as your friend who is a public school teacher who majored in Math (you remember, the one who is now teaching P.E. in Spanish?) In other words, we are trying to tell you that Public School Systems (despite the best intentions of the Board of Education, the Superintendent and the Principal of the individual school) do not always work out as they have planned on paper. You, too, someday may be asked to do something that is not Peripatology or O&M. We hope that you will follow the path of so many public school teachers who have gone before you .... put the child's or childrens' needs before your own inclination. American teachers since Public Schools began have been doing this, and we hope you will welcome the inheritance that these people have left you. Of course, you may reserve the right to gripe. We would suspect you of being maladjusted if you did not.

We have heard many of you reiterate that you are only one member of the team who is helping the blind child. Correct us if we are wrong, but did we not hear the unspoken words .... "of course, I will be the quarterback and call the signals?" This might prove a little difficult. You are the last man on the team and the resource teacher, the classroom teacher, the principal, the parents, and the state are all trying out for the same position. Sometimes each one gets to play in practice ... but we have it on good authority that it will be THE KID who gets the place on the regular team; it will be the KID who really calls the signals, who puts the rest of us on the bench or in other positions. Watch out for THE KID. He does not always play fair but somehow he always manages to call the plays. We think he has a clout somewhere ... we think he is an active member of the HEART APPEAL CLUB. It is a pretty powerful organization and the halo you received with your degree (because you are going to work with the blind) is not enough to get you a membership.

Maybe we should warn you about that halo ... IT ... IS NOT ... PURE ... GOLD! We think ours acted as a catalyst! We wore our halos proudly for a while, but now our hair is dingy grey. Guess we did not discard them soon enough.

Another thing we should warn you about. We rather hesitate to tell you this, since we have friends at both schools but sometimes college courses are not too realistic. Take the course BUTTON, BUTTON as an example. We know they reviewed the game which you played in childhood. One button and several players ... and a man in the middle. The object of the game was to hold on to the button until you were in danger of getting caught by the man in the middle. Then if you were smart, you passed it on to the next one before the man in the middle caught you. Well, we understand they are still teaching this but since the word Button is not university caliber, they have rephrased it. Now they call it "responsibility". They have taught you to pass the button to the parents, the resource room teacher, the classroom teacher, or the administration. We are sure that they failed to tell you that some of these players in the game will just refuse to take the button and the man in the middle (that sneaky KID again) catches you and you are left holding the button ... sorry, I forgot ... the responsibility right in your little pink hand. If you drop the button, the halo is going to pinch a little. When THE KID catches you, you had better admit you are IT and do something about it. We have all tried to play the Button game but we have learned that the one THE KID is with, the one he tags, has <u>all</u> the responsibility and must try in some fashion to make up for those who have refused the button. Or in university language "everyone is responsible for the entire child while the child is in his custody".

We do welcome you, honestly and sincerely. Now perhaps you can tell us some of the answers we need to have. Why do some blind children rock incessantly? How can we cure this? Why do some hang thier heads? Why do some parents break the balloons of the blind child simply because the child cannot see? Why do many blind people develop the disease which we might call WANT SYNDROME? What should we do when father's week-end liquor affects Monday's mobility of the child? When do we decide that the blind child is hopeless? Who decides? When would you give up? We need to know; we have needed to know for a long time; we have need of answers to these and many other questions.

Yes, we do welcome you, but also we hope that you remember that some of us have been wearing the halo for many years, that we have acquired some theories, we have tried some of the ideas which are shiny new to you. It is just remotely possible that we might have an answer for you. We would be so flattered to have you welcome us.

TEACHERS OF ORIENTATION AND MOBILITY

A questionaire to elicit information regarding the work of teachers of orientation and mobility was sent to the graduates of the two university programs. Forty-seven of the fifty-two questionaires sent were completed. However, as the respondents were answering for others employed at their agency there were more than 47 answers to some of the questions.

The following is a brief summary of the results of the questionaire.

1 - Position title

Seventeen different position titles were in use. However, 60% of all tiltes were those used by the two universities. 40% used PERIPATOLOGIST and 20% ORIENTATION AND MOBILITY SPECIALIST. In part this was due to the larger number of Boston College graduates in the field at the time of the survey.

2 - Where employed

Although some graduates were employed by public funded agencies, the larger number represented private agencies as places of employment.

The breakdown as follows:

(1) Private Agency = 21
(2) Rehabilitation center for the Blind = 11
(3) State Agency = 10
(4) Residential Schools = 6
(5) General Rehabilitation Ctr. = 5
(6) Federal = 3
(7) Public Schools = 2
(8) University * = 4

* Preparing teachers of O&M

3 - Number of other teachers in agency

(1) Most agencies employ but one person to teach O&M (22)
(2) Agencies employing 2 people (10)
(3) Agencies employing 3 people (9)
(4) Agencies employing 4 people (2)

4 - Transportation

To serve their clients most instructors travel by private cars.

(1) Private cars = 37
(2) Agency = 8
(3) State = 5
(4) Federal = 1

5 - Mileage

Miles traveled by teachers of O&M range from 0 - 750 miles per week
The average is somewhere between 70 - 250 miles.

6 - Conference and clerical time

(1) Time spent in clerical details: (a) average 1 hour per week writing letters
(b) average 4 hours per week writing client reports
(c) average 1 hour per week or less on telephone calls
(2) Staff conferences: average 2 1/2 hours per week
Mobility " : average 2 hours per week

7 - Equipment
In some cases it was difficult to determine the answer to the question relative to the amount and type of equipment used each year. The respondents reported a range of:

5 - 225 canes (purchased chiefly from A.F.B.)
2 - 150 grips (" " locally by the agency)
3 - 125 tips (mostly wooden or nylon)

8 - Client waiting list
The client waiting lists ranged from zero to over 25, with the average time on the list between 2 and 6 months.

9 - Follow-up
Follow-up service was afforded as follows:
(1) no follow-up provided - 15 instructors
(2) very limited follow-up service - 6 instructors
(3) one follow-up after training - 1 instructor
(4) several follow-up services - 23 instructors (range from every month to every year)

10 - Types of follow-up
Those who conducted follow-up services used the following methods:
(1) Home visits - 23 instructors
(2) Phone calls - 11 instructors
(3) Other - 7 instructors

11 - Results of follow-up services
(1) Most clients were using the long cane
(2) An evaluation of the use of the techniques taught indicated that most clients were using 75-100% of the techniques which they had learned.

12 - Source of salary
(1) Local agency funds - 21
(2) V.R.A. - Research and Development grants - 19
(3) State funds - 19
(4) Federal grants (other than V.R.A.) - 2
(5) Federal plus State funds - 1
(6) Other - 4

13 - Professional Organizations
Most respondents belong to a professional organization such as AAIB, AAWB, CEC, NRA, NEA, etc.

14 - Braille
(1) No use - 35
(2) Considerable use - 6
(3) Little use - 4

It should be noted that many graduates had no formal training in reading or writing braille.

MOBILITY AIDS EVALUATION AND PERIPATOLOGY

By

John K. Dupress

Research in, and development of, mobility aids for the blind began during World War II. Since then (a period of almost 25 years), more than a score of devices have reached advanced development and evaluation. The criteria for the design of these devices was established, largely, by engineers and physicists. The criteria for the methodology and performance of the evaluation phase has been determined mostly by experimental psychologists. It is only in this year, 1966, that teachers of orientation and mobility, peripatologist and other rehabilitation specialists have become deeply involved in evaluating the worth of sensory aids.

There have been four major evaluations of ultrasonic, visible light and pulsed infra-red units. The first project involved sonic and ultrasonic object detectors which were evaluated at the Haskins Laboratories (New York) from 1944 to 1948. The second project concerned a "chopped" or pulsed visible light device which detects objects, many stepdowns and curbs. Although this device was developed by the Signal Corps Laboratories (New Jersey), the evaluation was sponsered by the Veterans Administration, and carried out in suburban Philadelphia by Professor T. A. Benham of Haverford College, and his associates. The third device used pulsed infra-red light to detect objects and some terrain changes. The Veterans Administration sponsored the evaluation of this unit at Tracor, Inc. (Texas), although it was developed by Bionics Instruments (Pennsylvania). The fourth unit used ultrasonic energy to environment sensing of the bat. This unit was developed by Dr. L. Kay in England, and the production engineering was completed at Ultra Electronics Lts., England. The laboratory prototype of this unit was given the sponsorship of St. Dunstan's.

There are two independent, but concurrent, evaluations of the Kay-Ultra device underway: one at the National Physical Laboratory in England and one at the American Center for Research in Blindness and Rehabilitation, Newton, Massachusetts (under sponsorship of the Veterans Administration). During these evaluations, blind subjects have been tested with these devices, under two conditions, after limited periods of training. The first condition consists of controlled laboratory experiments which provide readily-analysable data. The second condition allows the subjects to use the device in their home and in their every-day mobility tasks. As a result of this field teasting, the evaluators have come to realize the necessity for both laboratory and field testing. Following relatively brief periods in the field, the subjects were questioned by the evaluators.

What conclusions have been drawn from the four completed evaluations? None of the devices has enabled the blind traveler to dispense with his cane or his dog. Skilled travelers have, invariably, done better with their previous aids (cane or dog) than they have with the electronic units. Only those with little or no mobility capability have performed better, in relatively simple and hazard-free situations, with these modern sensory aids. At the end of each evaluation, there have been recommendations for further development. To date, it has not been possible to include any of the devices in formal mobility training programs or to issue them for routine every-day use.

Before we can expect to achieve any significant progress, we should raise three important questions. (1) What information should sensory aids provide, if they are to be truly useful? (2) What should we try to find out in the course of our evaluations? (3) What contributions can peripatologists make, as part of a team effort, i.e., technologists and experimental psychologists?

If devices provide as much information as the cane or the dog, they can replace the cane or the dog. If the sensory aids are intended as supplements to the cane or the dog, they must sense the environment beyond the probing cane or provide data not obtainable from the dog or the cane.

In assessing the worth of a sensory aid as a replacement for the cane, it should be remembered that echo ranging, force impact, vibro-tactile and three-dimensional cane tip location are available to the skilled and experienced cane user. All objects and terrain changes which are apt to cause injury are detectable with the cane. In addition, there is considerable data for orientation and navigation. The cane is fail-safe, durable, economical, needs virtually no maintenance, is readily replaceable, and requires only man-power.

There is no electronic sensory aid, at present, which has all of these specifications. It is, therefore, unrealistic to think of an electronic sensory aid as a substitute for the cane probe and mobility training. The electronic aid should be used in conjunction with a cane, as a distance sensor for the area beyong the tip of the cane, to detect hazards above the cane but within the aperture traversed by the head, shoulders and most of the mid-body. The device might detect pedestrians, thus eliminating the necessity of striking them physically with the cane (the social penalty). Finally, now electronic devices can tell the user something about the composition and geometry of objects and their position in space.

If the electronic aid is to supplement the dog, who is a fail-safe object and terrain change detector, the emphasis must be on orientation and navigation cues. With the additional locomoting rate provided by the dog, over the cane, the electronic sensory must enable the user to process the data very quickly. The dog, with its in-tact visual system and brain, not only senses more information at near and far distances, but alson processes the information so that few decisions have to be made by its user. Also, the dog is able to analyse the existence of hazards and avoid them.

There are a number of social penalties involved when using a dog. There is no doubt, much annoyance created for sighted people when dogs are competing for crowded space in common carriers and other public facilities. In wet or dry weather dogs may be onnoxiously smelly to those who are olfactory-sensitive. Also, there are people who just do not like dogs near them.

It is these latter categories of social penalties, as well as orientation and navigation information, that electronic devices may be designed to supplement the use of the dog. Furthermore, since dogs become ill and die, at times when it is not convenient for the user to drop what he is doing to secure another dog, it may be very important that the dog user have enough cane capability, supplemented by an electronic device, so that he may have interim mobility capability. Also, there is the problem of the older blind person and the blind child. At the present time, neither group is considered a good prospect for dog use.

The first four evaluations resulted in recommendations that the devices be improved. The evaluations underway at present are intended to provide more constructive information on the worth of the devices. With this in mind, there are a number of key factors which should be included in any evaluation of electronic devices: (1) since electronic devices are supplementary to the use of the dog or the cane, and are not valid substitutes, the training procedures for devices, except for initial orientation to them, should be based upon the concept of using them in addition to existing solutions (cane or dog); (2) in all field trials, as well as in the advanced phases of laboratory experiments, the devices should be used along with existing mobility solutions. Data should be gathered on the basis of performance changes. At the present time, we have only one major criterion for determining the worth of electronic devices: Does the device improve the performance of the blind subject, under those conditions which are useful in his every-day travel; (3) in experimental psychology, the old condept of the control and the experimental group, which are matched insofar as possible, does not hold for these evaluations. The subject should be his own control, i. e., he can wear the device at all times during the experimental period. Part of the time, the display from the device should be available to the subject and, during the rest of the experiments, the output from the device should be available to the experimenters but not to the subjects. Thus, the experimenters have the output of the device at the time the subject knows the display is on, and also when the subject does not know the display is on. Then, valid conclusions can be drawn concerning the performance of the device; (4) in most of the evaluations, the experimenters did not know what information the subject was getting from the display, because they simply observed his performance and, on the basis of this performance, guessed at what contribution the device was making. In the evaluation of devices, it is essential that enough monitoring (or telemetering) equipment be used, so that the experimenter is aware, at all times, of what the device is actually telling the subject at any given moment. Along with the telemetered information from the device, photographic and other studies of the subject's performance should be captured and edited for future use in other evaluations. In this way, we will have a growing body of knowledge about the contributions devices make, the problems of evaluation, etc.; (5) more attention must be paid to the human factors interface between the device and the blind subject. During evaluation, it should not be assumed that the original instrument designer has chosen the correct display or method for carrying and using the device. When a designer has intended a device for hand-holding only, it may be advisable to use the device fixed to the body. It may be desirable to change the display, so that the information is more readily assimilated by the blind user; and (6) finally, and most important, a great deal more care should be exercised in selecting specific tasks in which the electronic device may be useful. In this regard, there are at least three major considerations: (i) tasks which are truly useful in the every-day life of a blind person. While a certain amount of "game playing" is desirable to motivate a subject in the early stages of evaluation, he will not accept the device unless he finds it useful in the field; (ii) examples for useful applications of electronic aids are: penalties, orientation and navigation information, advanced warning of the presence of objects and terrain changes, and truly useful environmental sensing under high noise conditions or in snow; and (iii) supplementing remaining sensory channels which have deteriorated due to aging, diabetes, or other causes.

The evaluation currently underway at The American Canter for Research in Blindness and Rehabilitation (Newton, Mass.) involves the participation of peripathologists from St. Paul's Rehabilitation Center which is nearby. After extensive on-site visits by researchers from England to some of our major mobility rehabilitation facilities, an evaluation is underway at the National Physical Laboratory, England. The impact of mobility rehabilitation programs and the data obtained from peripatologists has been incorporated in the design of these evaluations.

In the future, when electronic devices are ready for evaluation, it is extremely likely that there will be more extensive use of the knowledge and consultation of peripathologists. The team of the future, which can contribute to the progress of the development of mobility aids, will consist of engineers, physicists, experimental psychologists and peripatologists. A better working knowledge of each other's fields and more active cooperation is essential, if we are to achieve worthwhile results.

Summary and Conclusions

1. The state of the art allows electronic mobility devices to be supplementary, only, to the cane and the dog.

2. Among the special uses for electronic devices, in the near future, will be orientation and navigation information, early warning of objects and step-downs, important cues under masking noise conditions or snow, the avoidance of social penalties, and assistance in making up for losses in remaining sensory channels.

3. There are certain groups of blind people who may benefit most from electronic devices: (i) adventiciously blinded children who could be assisted in the perception of their environment by early exposure and training with certain types of distance-sensing electronic devices; (ii) the elderly blind population who not only are blind but suffer from the deterioration of their remaining sensory channels. The devices may be particularly useful to them for limited mobility; (iii) blind travelers who wish additional information to improve their mobility capabilities.

4. For the first time peripatologists are actively engaged in the evaluations of mobility devices, with particular emphasis on training. With an excelerated exchange of data among peripatologists, experimental psychologists and technologists during the next few years, we are likely to progress more than we have in the previous history of research and development of sensory aids.

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THE IMPORTANCE OF PARENTAL INFLUENCES UPON A PROGRAM OF ORIENTATION AND MOBILITY FOR CHILDREN

By

Robert Gockman

In August of 1962 Catholic Charities of the Archdiocese of Chicago introduced into its educational structure a program of Orientation and Mobility for blind school children enrolled in the Jr. and Sr. High School levels, financed by a grant from the Vocational Rehabilitation Administration. The program seeks to demonstrate the effectiveness of adult-validated orientation and mobility skills as applied to an orientation and mobility program for children. Skills utilized are those currently used at the Center for Blind and Visually Impaired Veterans, Veterans Administration Hospital, Hines, Illinois. A full-time orientor was hired to put this program into operation.

At the present the program is contained within the regular integrated, educational structure for blind youngsters and is initiated at grade six, while the children are still attending their assigned resource rooms. The program structure is based upon four distinct units: (1) An indoor

unit, utilizing skills basic for orientation and mobility, (2) An advanced indoor unit, which introduces the use of the Long Cane, (3) An outdoor unit, representing travel within a residential area, and (4) An outdoor unit composed of travel within a business area.

While there were many avenues of chance and experimentation to follow in the establishment of the present program, parental influence remains a basic consideration because a child's ultimate success in the area of orientation and mobility is strongly dependent upon parental attitudes, aspirations and the opportunities that they provide for their children.

In general, children's attitudes are reflections of parental attitudes. If the child is receiving orientation and mobility instructions and lacks motivation, expresses fear of travel, and has little desire for self-improvement, he will most likely be mirroring parental doubts, fears, and lack of understanding. At the age when children need to be very mobile because of expanding needs and interests, the instructor may be faced with a pattern of living that is too firmly entrenched to overcome. Every instructor who has ever worked with children has worked with a child who has been over protected. There have also been cases of parental rejection of the child as a member of the family, rejection of the fact that the child is blind, and very often a lack of comprehension of what the blind child is really capable of doing.

It is more difficult to try to change factors that have existed for a lifetime than it is to instill positive factors at the very onset. The most effective means of developing positive factors is through parent education as soon as this is possible. In the symposium, "No Place To Go," edited by K. Gruber and P. Moor, there is a recommendation that the parents be informed of the various aspects of blindness and be afforded professional counseling practically at the moment of birth. While it is impossible to think of an orientation and mobility instructor offering his services at this early date, it is reasonable to assume that he can be called upon to offer suggestions any time after the first few months to the pre-school age. Let us think about conditions as they actually exist; that is, without the inclusion of Gruber and Moor's recommendation.

1) Attitudes:

Even before the trained specialists make themselves known, various attitudes about blindness are already present in the minds of the parents. At the moment of birth, disease or injury when blindness may first occur, it is difficult for the parents to condition themselves and accept the idea of rearing a blind son or daughter. It is important to know what the parents think about blindness, because in many instances the attitude is essentially a negative one. If they believe that blindness is an affliction that denotes total dependence upon others and a life devoid of any normality, the resulting atmosphere atmosphere and conditioning will certainly plague the child for the rest of his life.

2) Aspirations:

What do the parents of blind child actually think the child is capable of? Are both parents equally cooperative in providing the normal and necessary goals of life that best match the child's interests and ability? It has been observed that the child will generally measure up to whatever expectations that the parents have established for the child. In other words, a successful child is successful because his parents think that he is capable of success and will do anything within reason to support this conclusion.

3) Opportunities for Gaining Experiences:

Do the parents of a blind child attempt to develop the child to his fullest by providing room for independent behavior and normal growth and development? Do they allow the child to explore or do they constantly block these activities by assuming that the child may be injured? Do they stimulate his thoughts and actions through play activities, conversation and encourage his participation in family affairs? An early start is imperative to the child's whole future.

While it is difficult to determine exactly what effect the parent series has had upon the childrens' ultimate behavior and the creation of more positive attitudes within the parents over the past ten years without going into an intesive study, there is lettle doubt that the magnitude of success that has enveloped the entire program has been triggered by this inclusion which was presented prior to the child's entrance into school. The information which was presented tended to relieve much of the anxiety that the parents had in relation to rearing a blind child and was the beginning, in many cases, of having the parents consider what they could do to assist the child to make the necessary adjustment to his blindness.

Who is responsible to see that parental influences are positive and coordinated so as to do the most good? In some instances the local agency for the blind will take the initiative and acguaint parents with necessary information or even counseling if possible. However, if a program of orientation and mobility is to established, it is important to be sure that this avenue of communication begins before the negative aspects prove to be insurmountable, or at the very least, hinder the amount of progress that could have otherwise been expected.

To cite an example, the Catholic Charities program has established a series of meetings for the parents of pre-school children. A number of qualified authorities have been drawn from the various departments of Catholic Charities, including guidance and counseling, social service, teaching and orientation and mobility. The parents of an older blind student related their experiences for the group and offered helpful suggestions. A summation of the Catholic Charities educational plan was presented at the final session by the Program Director. The entire series was planned to better acquaint the parents with blindness, present suggestions on how they could most effectively help their children, aid in the development of positive attitudes and aspirations, and lastly, how all the specialists wouls assist in the child's future education.

In addition to the objectives stated above, the parents seemed to benefit from being involved in a group situation where they had an opportunity to share common problems. They all felt that they gained a valuable resource from which additional information and assistance can be drawn in the future.

It is highly recommended that whenever a program of orientation and mobility is planned for children that a parent series be planned, either as a cooperative venture with the local Agency for the blind or solely through the efforts of the Agency that supports the program of Orientation and Mobility. The foundation of a good Orientation and Mobility Program lies not in the first lesson given by a qualified instructor, but in all those things that come from knowledgeable parents armed with positive attitudes and high expectations for their children.

MOBILITY TRAINING IN RELATION TO A TOTAL AGENCY PROGRAM

By

Edward H. McDonald

There have been many articles written in the area of orientation and mobility training for blind people. However, many of these articles deal with orientation and mobility training as an individual technique and skill that will help blind people in their total adjustment. This approach treats mobility training as though it exists in a vacuum. The purpose of this article is to view orientation and mobility training in relation to a total agency program.

In September, 1964, the Rhode Island Association for the Blind received a Research and Demonstration grant for orientation and mobility training for blind people from the Vocational Rehabilitation Administration. The purpose of this grant was to demonstrate to leaders in the field of work with the blind and to the leaders of the agencies servicing the total community the value in orientation and mobility training for blind people. The Association hired a peripatologist from on the university training programs. From the beginning it became evident that if the Orientation and Mobility Training Program was to be effective, it should work in relation to a total agency program. Not only would mobility training strengthen the other programs, but it, in turn, would be strengthened by the other programs. It is now possible to reflect back over a year's work and to determine how each has augmented the the other.

In the area of casework and counselling services, the peripatologist had at his disposal a professional social worker. This social worker was responsible for the intake process of mobility training and worked very closely with the peripatologist in the work-up evaluation. The caseworker interacted with the total community in order to receive opthalmological, audiological, and

medical evaluations regarding potential clients. She visited each person referred and did a psychosocial study, evaluating each individual and family in relation to their total needs.

This preparation was invaluable to the peripatologist. When he initially visited each client he was capable of knowing a total picture of the client. The instructor knew the strengths and the weaknesses of the client and, thus, was more capable of making the client aware that mobility training would be beneficial to him. He knew the arguments that each client would put up against mobility training and was prepared to answer these arguments with constructive counselling. Once mobility training had begun, this process allowed the client to have a meaningful relationship with somebody other than the mobility trainer. If emotional or attitudinal blocks were encountered, there were total casework services available to the client.

Within the confines of the Association is housed a Vision Rehabilitation Clinic. As the Mobility Training Program developed it became increasingly obvious that the two services augmented one another. Over ninety per cent of the people referred to the Mobility Training Program had some sight. This sight was often dexcribed as light perception. However, the peripatologist became increasingly aware that many of these clients had sight which could be utilized for constructive purposes. If the instructor while working with the client realized that there was a possibility that the client could benefit from the Vision Rehabilitation Clinic, a cross referral to that clinic was made. Often the clinic's optometrist could prescribe objects at a close range may have or may not have assisted the client in his mobility. In most of these cases, mobility training was still necessary.

Conversely, many referrals were made to the Mobility Training Program by the Clinic. Low vision aids many times open another perceptual avenue to the peripatologist in describing complex traffic patterns and complex intersections. They also strengthened, in the long run, the ability of the client to visualize objects mentally without a neurological stimulant. This ability of the blind to visualize objects mentally is very important in planning a Mobility Program. It is the prime consideration as to whether the client to be classified is congenitally blind or adventitiously blind.

One of the greatest problems encountered by the Mobility Training Program is to be certain that the stimulus to travel is afforded the clients who complete the program. It is absolutely useless to train a client to travel if he does not have a place to go. The rehabilitation for industry program and sub-contract workshop affords a resource unit for people who have completed training; it is a place to go. Thus, we now see how a Mobility Training Program interacts with three other programs on the inter-agency level. Each in turn is strengthened by the other.

The next question is how has the Mobility Training Program strengthened the agency within the total community. One of the most vital areas in inter-agency relationships is the manner in which one agency's services augment another agency's services. It is the desire of the Association to utilize the total community resources to provide services to its clients. We realize that many specialized services are needed by the visually impaired which are also needed by their sighted peers. Therefore, we actively seek out other agencies which can provide these services to the visually handicapped. We in turn are sought out by other agencies for our knowledge and skills in the area of work with the blind.

In order to better service our clients a differential diagnostic approach is utilized whereby people of different skills and different professional disciplines are brought together to plan a total program for the client. Often our mobility instructor is asked to play a vital role in just such a team.

Perhaps the most important community agency which has interacted with the Association in providing services to blind people is the State Division of Services for the Blind. The vocational rehabilitation section of this agency has referred approximately seventy per cent of all clients serviced under the Mobility Training Program. The administrative staff and professional counselors in this agency are conscious of the vital role that mobility plays in the total planning for their clients. One of the counselors recently stated that the clients's ability to get to the job on time and to be able to get about once on the job is the most vital concern of any potential employer. Therefore, any total program for a client should include some consideration of his mobility needs.

As the Mobility Training Program has developed it has become increasingly more and more a resource for the State Department of Education. The State Department of Education, through the Division of Services for the Blind. refers blind children to our program for mobility training.

By this process the integration of the blind children into the public schools in Rhode Island has been greatly aided. Invariably, the greatest obstacle to the placement of children in public school is the school's fear that the child's life and limb will be endangered. Mobility instruction prior to placement within the school setting and carried on as an on-going process after school placement, has alleviated the concern of these educators. Thus, the Rhode Island Association for the Blind has become increasingly more involved in educational planning for blind children.

One of the most important aspects of the Association's community commitment is in the development of the unmet needs of the community in relation to the area of work with the blind. Within the past year a program has been developed, in cooperation with the State Division of Services for the Blind and the local agency servicing people of all handicaps, in evaluation and placement of blind people in industry. It was decided that the initial consideration in such a comprehensive program would be the mobility needs of the client. The local agency which serves as the evaluation unit states that one of the most important aspects of evaluation of a person's potential performance is, "Can he get to and from the evaluation center on time?" It, thus, became necessary for clients seeking evaluation to have mobility training. Upon completion of evaluation, extensive training was to be provided by the Association's rehabilitation-for-work program.

Another recent development has been an attempt to develop the community resources in order to meet the needs of the multiple handicapped blind. Whereas there existed facilities within the community for the placement and evaluation of mentally retarded, emotionally disturbed, and neurologically impaired clients, often these facilities were not made available to the blind multiple handicapped client. The Association has recently made available, to the community agencies dealing with the multiple handicapped, the skills of its social service and mobility training staff.

Conclusion:

The success of the Mobility Training Program of the Rhode Island Association for the Blind can be attributed to the "team approach" along which it has developed. It interacted from moment of its conception with the other Association programs. It was influenced by the other services and it in turn influenced the other services. This is our success pattern. Mobility training is just one service in a total program; the total program's standards are its standards. It will succeed as the total program succeeds.

SEVERE VISUAL IMPAIRMENTS - PART I

By

Donald Blasch - Loyal E. Apple

The present definition of blindness is such that persons are called "blind" whose vision has been impaired from 80 to 99+ per cent of normal. The generally accepted definition of blindness is: Visual acuity of 20/200 or less in the better eye (with correcting glasses); or central visual acuity of more than 20/200 if there is a field defect in which the peripheral field has contracted to such an extent that the widest diameter of visual field subtends an angular distance no greater than 20°. Semantically this term creates misunderstanding not only among ourselves, but with the person who is still able to use any visual information within the definition.

The totally blind person loses his ability to manage the world by visual means only once--when his blindness occurs. The person who has a severe visual impairment loses his ability to manage the world by visual means many times per day, but under certain circumstances or conditions he retains his ability to manage some of the world. Persons whose visual information has become limited to 20 percent or less of that which they formerly had to organize or manage the world, suffers a severe loss. There is still something familiar about the visual information which they are receiving but it is not the same visual information with which they organized their management of the world. Sight is the dominant sense of our sensory system and individuals will tend to retain its use no matter how inefficient it becomes. The rehabilitation process must take into consideration that an individual should be rehabilitated specifically to the level of his impairment and every effort should be made to incorporate his remaining vision into an effective and efficient system of personal management.

Total blindness is a devastating experience. Uncertainty regarding its permanence is of short duration although the concerned individual may need time to accept it. From the time of infancy he has developed habits and skills which have saved him thought, energy and time. He had developed stores of information and methods of dealing with family, friends and his general social milieu. His education may have started and perhaps finished; his occupational or professional skills may have been formulated or developed according to his assets and limitations; his job may have been secured. Loss of sight has the effect of wiping out this painstakingly built organization developed prior to the loss of sight.

Habits which were there are still there, but if they rely on sight for their performance, they are useless. The acquired habit of tying one's shoe requires no revision once a system is devised for locating the shoes. This is equally true of brushing one's teeth, smoking and numerous other time-worn habits. These are simple habits in comparison with the more complex habits such as driving cars, mowing the yard, catching the bus or shopping for groceries. Sight has certainly been one of the greatest assets with which persons have organized their lives and dealt with the changes and eccentricities of their environment.

The life demands placed upon a severely visually impaired person are the same as those for a blind person. The functional response to these demands is more varied in the case of the severely visually impaired. The effects and dynamcis of emotional adjustment are very similar in both cases, differing primarily in intensity, duration, and stability of adjustment. An understanding of the dynamics involved in the rehabilitation of the blind can be used as a base in formulating the dynamics for the rehabilitation of persons with severe visual impairments.

The control of his environment and himself in relation to it by visual means is a key question in the rehabilitation of the severely visually impaired. The realization that changes are occurring in his ability to control himself and his world by visual means comes as a severe shock. This emotional impact may be repeated or reinforced each time more circumstances arise that prevent him from controlling himself and the environment by visual means. The main tendency will be to cling to those environments and situations that will present familiarity or the opportunity to control by restricted visual means, thereby partially denying that any serious visual impairment exists. Attempts to move about and function in the habitat they were accustomed to, prior to the acquisition of severe visual impairment, would reveal many inadequacies that they have no means of dealing with. These inadequacies in functioning occur in direct proportion to the extent of the visual loss and the degree that he is attempting to function in ordinary life situations.

There are mainly three avenues open for the severly visually impaired persons. They can withdraw into the environment and situations that are familiar and unchanging and may be controlled with restricted visual means; this would be very constricted and not allow the individual to live a full life. They may attempt to continue their life demands in full, enduring the hardships, inconveniences, dangers and misunderstandings that will become an integral part of their existence. It is usually these persons who are often classified as "charlatans", "fakes", and "drunks." Their strenuous efforts to deny the limitation of impaired vision is a tremendous drain on their physical and emotional resources and they often find themselves operating on a razor's edge. This directly affects their sense of well-being, creates a high level of anxiety, and puts a strain on all interpersonal relations. The jeopardy of their personal safety is a constant factor.

A third course would be for the visually impaired person to obtain an objective viewpoint of the restrictions and assets his residual vision affords him and to make the reorganization of attitudes, skills, techniques and use of aids. His success in achieving his former level of functioning will, in large measure, depend on the practicality of his overall reorganization. This is not an easy task; there are no set rules; every case is different; it requires frequent interpretations to the client and his maximum efforts; it requires understanding on the part of the rehabilitation team involved, as well as their best coordinated efforts to achieve the maximum results. Changes in visual impairment may occur during the rehabilitation process making it essentially a new case with which both the client and rehabilitation team must deal.

Severe visual impairment produces degrees of disabling physical insecurity. The therapeutic processes used in the reorganization of the totally blind are effective in developing the awareness of the utility of the remaining senses and the acquisition of new skills and habits. It will enable him to discover that the remaining senses are able to provide supplementary information and this is the key to improved functioning. Quite often the correlation of visual information and other recognized and relevant sensory inputs does a great deal to enhance effective use of vision. Physical security, with more effective and efficient functioning, also has a direct bearing on this increased effective use of vision. There are specific techniques which will enable the severely visually impaired person to make maximum use of his residual vision.

The social adjustment is the most complex, least clearly defined, and most difficult to develop. The greatest difficulty in attaining an adequate social adjustment stems from the fact that the severly visually impaired person has great difficulty in identifying himself as sighted and is reluctant to identify himself as blind with all that being "blind" semantically implies. Either course that he attempts to pursue is fraught with great personal difficulty, ambivalence and stress, forcing him into some compromise. In effect, he has a handicap of an unusual nature; one that requires methods of development and adjustment sufficiently different from the totally blind to make it a distinctly different disability. The designation of the diagnosis severely visually impaired (S.V.I.) would enable the rehabilitation personnel to bring together all their experiance and know-how into a systematic body of knowledge regarding this disability.

This systematic body of knowledge should be able to help the severely visually impaired (S.V.I.) person identify areas and situations wherein it is appropriate for him to use specialized techniques and when they are not necessary. He must become skilled in interpreting his disability to others when the situation demands an explanation. He must do this objectively, honestly and appropriately if he is to achieve acceptance and make an adequate social adjustment. He must be keenly aware that it will be difficult for the lay public to understand why he needs specialized techniques in certain areas and situations when at other times he reacts as a sighted person. A simple explanation will do a great deal to alleviate suspicions and put the other persons at ease in social situations. Initially, he may become provoked or irritated for having to give these explanations, but as he moves in a certain milieu the frequency of the explanations diminishes and the necessity for explanation will occur only when he finds himself in an unfamiliar environment. In his contacts with totally blinded individuals, in order to forestall feelings of mistrust or suspicion, he should explain to them that his residual vision enables him to do many tasks by visual means and that he is not superior in this area because of greater skills or techniques. Failure to do so makes social acceptability more difficult.

Rehabilitation personnel and those closely associated with the S.V.I. individual should know that he has a "built-in ambiguity" that makes it difficult for him to acquire a realistic self-concept. He will usually tenaciously cling to his identity as a sighted person.

Talk Delivered by Mr. Robert H. Whitstock
at the 4th & 5th Sessions of the
AAIB 48th Biennial Conference, June 29, 1966
Salt Lake City, Utah

SUGGESTED RESEARCH IN ORIENTATION AND MOBILITY

By

Robert H. Whitstock

Before outlining some suggested areas of research in orientation and mobility for blind children, I feel it is important to examine briefly some principles of research itself. I believe this vital, since too often those schooled in social scientific discipline consider nothing to be true unless validated by social science technique. Such an approach troubles me, since so much in Western culture has been achieved through a pragmatic accumulation of wisdom based often on trial and error. In other words, research technique itself is but one avenue to knowledge and not the exclusive entry to truth.

We live in age in which science is a living ferment, evidenced by tangible advances in material wealth. This is an age in which tremedous strides in the physical sciences have raised scientific research to a prominent place in the acquisition of knowledge, and yet in the so-called "hard sciences", research procedures are only one phase of the scientific method.

Advances in behavioral or social sciences have taken place also. However, the subject matter of these sciences is more complex and less amenable to laboratory investigation. With all due respect to the social scientist, his role is still that of a pioneer and his approach is still quite primitive. The techniques available, despite great strides forward, are still unrefined, and thus, for his conclusions to be interpreted, a realistic viewpoint is essential.

Some days ago I came across a news item which illustrates the point I am trying to make. In giving this example I want to make it clear that I believe firmly that social scientific research is valuable and it holds my highest regard, but at the same time it seems obvious to me that we are only at the beginning of a path that will lead eventually to greater refinement of technique and greater validity of conclusion.

The actual figures involved escape my recall, but I remember the relevant elements of the news item. The appropriate federal agency hired a research team to study the possible impact of allowing jet aircraft to land at National Airport on the outskirts of Washington, D.C. This is a busy airfield, already overcrowded, while Dulles field, also serving Washington, D.C. but somewhat further away from the Nation's Capitol, was being under-used. The study was an elaborate one involving considerable expenditure of money, and was conducted by experts. Their conclusion was that if jet planes were allowed to use National there would be no appreciable increase in air traffic and no diminution of service at Dulles. Consequently, acting on this research finding, jet traffic was allowed into National Airport. Almost immediately this already overcrowed facility experienced a sharp increase in the number of passengers handled. Simultaneously, Dulles field went through a sharp decrease in the number of passengers handled. The upshot of the news item was that the federal agency was now hiring a new group of researcher to find out what could be done to reverse this unexpected trend.

Tying the discussion to our own field of endeavor, it is my belief that much of the research carried on in work for blind persons has too often been based on minute samplings. Much of it is in the form of paper surveys conducted by undertrained individuals. Such efforts should certainly not be discouraged, for they, too, are avenues to fact and provide insight into the problems we seek to resolve. But the kind of research effort I would like to see would be massive in-depth studies by trained professionals into certain large problems which affect blind persons.

Before enumerating these areas of study, I would like to outline some fundamental principles which I believe should govern this proposed research approach. First, I would recommend such studies be centered in universities or research centers, which would coordinate their activities with schools or agencies directly serving blind persons. This would insure greater objectivity as well as bring to bear the wisdom from a wide variety of ddsciplines. I do not believe it to be deliberate, but so much of what we call research today in our field seems to produce conclusions which coincide strikingly with the preconception with which the investigator began.

Secondly, the research effort should be an in-depth approach, utilizing as large a sampling of individuals as possible. I believe this would increase the validity of the conclusions reached.

Thirdly, a much-voiced complaint by researchers is that their findings often gather dust and are not used for guidance in direct-service programs. There is probably much truth to this allegation, but responsibility for such an occurrence must be jointly shared. The language often used in research documents defies easy comprehension, while organizations providing grant funds often fail to create an appropriate mechanism for easy communication between a research staff and direct-service personnel. Consequently, I would strongly urge that research documents be formulated in language understandable to intelligent educated laymen, so that the findings can be realistically interpreted and applied. I would urge further that the sponsoring organization set up procedures within a grant whereby direct-service personnel and research staff have easy access to one another so that a channnel of communication can be kept open during and at the conclusion of a research study.

Finally, we live in a nation and at a time when many problems, - not only blindness - need attention. As responsible citizens of this nation we have a duty not to pressure for funds beyond our fair share of the nation's wealth. Research, in a sense, is an investment, and research funds should be spent selectively and wisely, and not indiscriminately for those whose demands are most strident. Moreover, though it may defy forces perhaps inherent in the bureaucratic process, unused funds should be returned to the grantor and not dissipated by forced spending.

Having set forth the above guide lines, I would like to turn to the specific areas which I feel need research. To avoid misunderstanding, I must return to a basic premise that research is an avenue to knowledge; consequently, the points I raise will be in the form of questions which I believe need expanded anxwers. The questions are not meant to chastise the fields of education and rehabilitation for blind persons, but are meant rather to shed light on problems we face. Tremendous strides have been made in all phases of human development, but we are far from a millennium. With the kind of research spelled out above, I think we can gain new insights into our work, and we will be better able to know which approaches succeed and which should be discarded. Orientation and mobility skills for blind persons are complex capacities intricately embedded in human behavior and development. They involve an individual's self image, motivation, and opportunity to be independent. Consequently, the areas suggested for investigation are broad and far reaching, but, I believe, intimately related to the use and development of orientation and mobility competence.

We believe that parental attitudes and early influences within a home definitely affect a blind youngster's later capacity. Is this true - and if so, why have not extensive services been available to parents of blind children? What kinds of parental services can be devised and how may the results of their effectiveness be verified?

What problems, if any, are there apt to be in the neuro-muscular development of blind youngsters? If there is undue frequency of this type of problem, what medical programs can be brought to bear which will correct such developmental distortion?

We believe many blind youngsters have an undue number of anti-social mannerisms. If this is true, what are these mannerisms and what has brought them about? Is it true that some underdeveloped nations rarely see similar mannerisms, and if so, why? What can we do to reverse such tendencies in our own youngsters?

What about the self image of blind persons? What can we bring to bear from the general field of psychology and psychiatry that can help to shape healthier attitudes? How effective, really, are the psychological testing procedures presently employed?

What can we find out about a blind youngster's ability to picture his surroundings? Does haptic imagery exist and if so, who possesses it? Can imagery training with the congenitally blind person be successful, and what kind of programs does this require?

Are there weaknesses in the physical and recreational development of blind youngsters, and if so what can be done to correct these lacks? Are we doing all we can to broaden the interests of blind persons and enhance their opportunities for physical expression? Have we tended to stay too tightly within traditional categories, and have we failed to develop the non-academic capacities of blind individuals?

Are blind youngsters over-verbal and if so, why? What can we do to make experiences have meaning, and to help blind youngsters relate vitally to the people and things around them?

What lacks exist in school systems which make it necessary for congenitally blind graduates to require additional training in rehabilitation centers or in post-graduate rehabilitation courses?

Do we have adequate guidance and counseling units within our school system, manned by professionally trained personnel? Are such administrative units valuable, and if so what can be done to initiate such programs into the school systems concerned?

In the area of employment is there a long wait between graduation and job placement? If so, why? Is there adequate coordination between school systems and adult placement agencies?

Is adequate vocational information brought to the attention of youngster attending school, and is there still a tendency to categorize jobs within narrow limits which blind persons may realistically pursue?

When should formal orientation training begin, and who should be responsible for its direction? When should actual mobility instruction start? How best can it be programmed? Who is doing the mobility training within the school systems, and are they qualified to carry out this responsibility?

Last, but not least, I would like to know something about follow-up services. I would want to know whether long canes and dog guides are actually being used - not through a subjective questionnaire - but through actual first-hand knowledge. If they are not being used after successful completion of training courses, I would want to know why not. I would want to know, also, which types of program serve which individuals best. For example, does a specific individual, trained in his own community, show more likelihood of success than the individual trained in an intensive rehabilitation center or school? Will this vary with the individual and if so, what characteristics seem to be distinguishable?

Certainly, these questions cover a variety of areas, but I do feel they are worthy of in-depth research. Such professional studies could provide very valuable information, but I cannot help but refer back to my earlier point -- that research is but one avenue to truth. The wisdom of experience, the insight of objective observation, and, above all, common sense, continue to play along with other techniques their important role in our efforts to bring genuine independence to the lives of blind youngsters.

THE BLINDFOLD AS USED IN ORIENTATION and MOBILITY INSTRUCTION

By

Larry Hapeman

The sense of sight is the dominant sense and a verifier of the other senses. If a coin is dropped in a room, the sound is heard by everyone present. Not only will the sound give away the location, but to the semi-trained ear, perhaps even the value of it could be determined. However, those who heard the coin will turn their heads in order to see it. Not satisfied with the information obtained by sound, automatically a person will try to verify what he hears by using his sight. Because of its range, exactness, and fine discrimination of sound is redundant or unnecessary. Even in the case of a person with limited vision, if that vision can be used to verfy what he hears, smells, or feels, he will try to use it. He is not content with what he hears nor does he have the confidence in any of his other senses as he has in sight.

The degree of discrimination, the accuracy of judging speed and distance, and the determination of exactness in size, shape, color, and texture by sight is not automatic. One learns how to use his sight through practice. In the early stages, a child is helped largely by his parents and teachers. What he sees is given a name as he sees it. He is also taught size, distances, and begins to discriminate and classify objects according to what he sees. Specific odors, inclines, slopes, sounds, and texture, as well as difference in ground surface are at best merely mentioned but seldom learned or used. After a few years, much of his learning builds upon his repertoire and storehouse of experience and information acquired through sight. He has confidence in what he sees.

Little time is spent in teaching him how to discriminate, classify and use sounds, odors, inclines, slopes, temperature changes, etc. He does not build up a rich storehouse of experience in these available sensory clues. Nor does he have the same confidence in the data received by his sense of hearing, smelling, or touch. He has little need to achieve confidence in his remaining senses as long as he can verify them by sight.

If fate brings blindness to one who has seen, he loses not only sight as a dominant sense, but also as verifier of his remaining senses. The need to learn how to discriminate and use the information received by his remaining senses is suddenly forced on him. He must try to gain the same confidence in his other senses that he had in his sight. In total blindness he has no choice. But when vision is only remarkably reduced or obscured, he does have a choice. Will he try to learn to use and discriminate and have confidence in what he hears, smells and feels as though he were totally blind, or will he try to use his faulty sight as a verifier?

For one who realizes his limitation, the choice seems obvious. He will try to develop, use, and gain confidence in his remaining senses and use his vision only as an extra margin of safety. However, it is quite difficult to simply forget your sight. It even takes energy to keep the eyes closed. Therefore, in the training and rehabilitation of blinded persons, the blindfold has been a valuable aid.

The blindfold is used during orientation and mobility instruction of a blinded person who has limited vision in order to help him become aware of, develop, use, and rely on his remaining senses. The blindfold takes away the choice to use his faulty vision or not to use it. During the instruction, the blindfold affords the patient the opportunity to validate and practice using his remaining senses in order to attempt to achieve the same confidence in them as he did in his sight. It makes it easier for him to learn and practice how to use landmarks and guidelines in his environment. It is important to be able to identify buildings, stores, street corners, and crossings, etc., by remembering certain outstanding physical landmarks, odors and sounds which are peculiar to each. Further, the blinded person has the opportunity to gain confidence in and validate the techniques of safe, efficient and effective travel as they are taught him. And finally, with the choice gone, it is easier to concentrate on the verbal instructions of his instructor as well as the sensory clues of his environment.

Once he has achieved the confidence in his remaining senses and cane technique and uses them effectively as a safe and efficient traveler while blindfolded, the blindfold is removed. He then learns to utilize his remaining senses with his limited vision. His vision could be thought of as an extra sense since he has developed and used his remaining senses and learned the technique of effective travel without the use of sight. The instructor continues to check him to be sure that he uses good travel skills and his remaining senses after removing the blindfold. If he reverts back to using his faulty vision as his principle source of information, it may be concluded that he has not had enough practice blindfolded to gain the confidence in his remaining senses or techniques. In such a case, if time permits, he should continue lessons with the blindfold.

In summary then, the blindfold is worn by blinded persons with limited vision in order that they become aware of, develop, use and gain the same confidence in their remaining senses as they had in their vision. However, what of the congenitally blind?

In such cases, the need to use remaining senses was present at the start. To a degree greater than those who have seen, they have early learned to discriminate, use, and rely on what they hear, smell or feel. Sight as a verifier played a lesser role than with a person with good vision. Therefore, in large, it is not necessary to diminish the role of sight as an aid to travel and increase the role of his remaining senses. But it is important to further develop the use of remaining senses as aids for independent travel. So in large, if the prognosis is good, it is not necessary to use the blindfold. However, in order that he can gain confidence in the techniques of travel, and become more efficient in using his remaining senses and these techniques, he should have some practice with the blindfold. This may also reassure him that he can be a safe, effective, efficient, and independent traveler even with faulty vision. If the prognosis is such that he will lose what little vision he has, the blindfold would be used for longer periods.

Now for the instructor who must decide if his patient or student should wear the blindfold, there are other things to consider besides the basic reasons for using it. To be blindfolded is to be placed in a stressful situation, even more so if over a period of time, your eyesight has been a major concern. To ask a person to wear a blindfold should be done tactfully and with due consideration for the individual. He should be told why it is to be worn and coached into wearing it.

In some cases, even if the visual prognosis is poor for an individual with limited sight, the blindfold should not be worn. A case point is when the blindfold would be detrimental to the eye condition of the student. If the student is elderly, or has difficulty with balance, or has poor hearing, wearing the blindfold might be too great a handicap for him. Nor would it be used in a case of mental retardation where the student has difficulty remembering and performing the techniques and sensory clues. In addition, if the student is a child, he may reject the blindfold as well as the cane for it sets him apart from his friends and is socially unacceptable to him. Again, tact and discretion should be used by the instructor.

In all cases, the instructor should expect signs of anxiety and stress by his patient during his first few lessons with the blindfold. He should be ready to admit that the blindfold could be too stressful for some students while some other students may just claim that it is too stressful. He should not force a student to wear it but should "sell" him the advantages of using it. And finally, the instructor should be alert and consider the individual condition and needs of each of his students. The blindfold is an aid to the instructor of orientation and mobility for many blind persons. It is not the answer for others and it will never replace a good instructor.

THE HANDICAPPING NATURE OF MENTAL RETARDATION

By

Henry V. Colella

Mental retardation is a staggering national problem presently evoking interest among laymen and professionals in almost every segment of our society. The mentally retarded are individuals who demonstrate impaired abilities in learning, or in adapting to the demands of every-day living. Since it is estimated that three percent of our population, or 5.6 million people are mentally retarded (in some quarters the estimate is as high as 16 per cent), it is easy to acknowledge this condition as a major national health, social, and economic problems. It affects twice as many individuals as blindness, cerebral palsy, and rheumatic heart disease combined. Fortunately, the majority of the mentally retarded, about five million, are individuals with mild disabilities. Conceivably, through optimal educational, social, and emotional adjustment, the bulk of this group can become self-sufficient, self-supporting, self-respecting, and socially responsible adult citizens.

The more severe cases of mental retardation are likely to be associated with organic defects. These severe cases tend to be found at all socio-economic levels. The bulk of the mild cases, however, appears to be concentrated among parents with inadequate education and low income.

Recent research has suggested that besides intellingence, personality and emotional factors may be important components of mental retardation. Consequently, to talk about the phenomena as a unitary trait is not the most useful way of approaching it. In describing areas of weakness in learning, personal adjustment, vocational potential, etc. It is not enough to say that an individual is retarded. This statement must be qualified and implemented in a descriptively useful manner.

In the early 1950's, DiMichael conducted an extensive study in the rehabilitation of the retarded. In this study 592 persons had been provided with extensive service and training for a period of approximately two years. Prior to their specialized training this group of retardates had a total gross income of $35,900. After the program their earnings as a group rose sharply to $992,400. The results of this study certainly indicated that occupational success was an attainable goal for many of the retarded.

Since many retardates may also have physical or sensory disabilities, it is apparent that educators must become knowledgeable to the point of sophistication in the total area of handicapping conditions. Perhaps the first step on the road is an awareness of the relative nature of the term "handicap". Regardless of the nature of any disability, an individual is only handicapped to the extent that the demands made upon him by a specific activity are inhibited or prevented by the disability. Thus, a totally blind person would be looked upon as hopelessly handicapped by an airline pilot training program, but might not be so looked upon by a manufacturer who assembles TV components. In the same sense, a mildly retarded person appears handicapped in the eyes of the reading teacher, but perhaps less so by the owner of a used car lot who wishes to employ him to wash and polish his cars.

Epidemiological studies performed on large population areas have yielded incidence curves in mental retardation which indicate that the bulk of the mentally retarded are so indentified during school years rather than before or after. These curves present tentative evidence of the relativity of the term "handicapp", in that so many individuals are perceived as mentally retarded only when certain types of demands are made upon them.

This is not to say that a handicap exists only in the eye of the beholder, but that the handicapping condition can stem not only from a disability, but also from the nature of the demands made upon the individual. The general aims of educators are focused on locating and developing whatever potential mentally retarded individuals may have, with an eye toward equipping them to function in a non-handicapped manner in as many life situations as possible.

TEACHING ORIENTATION AND MOBILITY TO MENTALLY RETARDED BLIND

By

Paul R. McDade

In a previous issue of the newsletter mention was made of a three year Orientation and Mobility Demonstration and Research Project presently being conducted at the Walter E. Fernald State School in Waltham, Massachusetts under the sponsorship of the Vocational Rehabilitation Administration. The goal is to determine (1) the most effective orientation and mobility teaching techniques that can be employed with a residential population and (2) how beneficial these techniques are in the education and rehabilitation of this group. The last phase will be devoted to a statistical evaluation of all the project records and data, so no definite statements can be made at this time. However, the first and second phases have resulted in significant observations that can be noted at this time.

During the first phase of the project, ten subjects received orientation and mobility training. The methods and techniques employed were those generally used by teachers of orientation and mobility. When the subjects acquired facility in the basic orientation and mobility skills they were introduced to the use of the long cane and were given instruction on indoor and outdoor travel. Outdoor orientation consisted of developing geographical directions, using the sun and various buildings as points of reference. Position and relationships of landmarks were developed. The subjects were given the opportunity to make short trips on the institutional grounds in order to practice the skills and techniques of orientation and mobility. This afforded the supervisor the opportunity to determine necessary adaptations of conventional methods.

Within a relatively short time it became evident that most of the basic mobility skills and techniques could be developed as long as continuous practice and repetition could be provided. The limited abilities and the need for constant repetition and correction of the subjects resulted in a maximum enrollment of ten subjects. It was decided that there would be more value in properly training a smaller number who would be competent in their newly acquired skills than to attempt to fulfill the subject quota anticipated originally.

In addition to success in the training of the subjects involved in the orientation and mobility project, there are slso preliminary findings believed to be of much value to those planning to work with institutionalized or more severely retarded blind subjects. The adults subjects are generally more motivated to mobility than are the younger subjects. The possibilities of independent travel after many years of blindness and limited mobility would seem to be a partial explanation for positive motivation. Mobility success in adult subjects may be associated with the fact that they lack the apparent abnormal functional patterns that are evident in the younger congenitally blind subjects. Functional patterns of posture and gait such as rocking movements of the body, everted feet and extended arms are commonly observed as characteristics of the younger group. It would seem that the mobility induced by institutionalization results in positive motivation for travel for this younger segment also.

In a mobility program for the young congenitally blind group a considerable amount of time and effort has been expended in developing basic orientation concepts. This has resulted in a longer period of time spent on basic techniques than had been anticipated. The older group required less extensive orientation anticipated. The older group required less extensive orientation. With the younger congenitally blind much more time is required to develop such concepts as body orientation and the relationship of extremities to the body. From this followed the relationship of the body to the environment. Concepts such as shape, form, texture, and dimensions are extremely important to develop before introduction to formal cane practice can be initiated. The younger group is extremely deficient in these knowledges. Teaching these concepts involves months of instruction and repetition. It was necessary for the Peripatology staff to devise and develop sensory teaching aids for this purpose. Relief impressions including maps, geometric shapes and tactual aids were employed to develop concepts of shape, form, texture, and dimensions.

In relation to a complete mobility program much more time and emphasis had to be spent on basic orientation concepts than on actual cane travel. Concentration on building proper concepts should lessen the time required for mastering adequate travel skills. Experience has proven than an incomplete grasp of these basic concepts may result in limited travel ability. This important factor of time consuming and thorough preparation has resulted in a smaller group receiving mobility training than was anticipated. Success of this project should be evaluated therefore by the quality rather than the quantity of mobility subjects.

Previously continuous motivation for the subjects regarding mobility training posed a problem due to a lack of practical application of mobility training in the subjects' daily living. This factor has been partially alleviated by the realization of realistic goals. Two of the mobility subjects have been successfully integrated into a pre-vocational program with the sighted in the institution's school. Since January, the integration has afforded them the opportunity for daily independent travel from the Greene Blind Unit to the institution grounds. In September of 1967, six more subjects, now in mobility training, will also be integrated into the pre-vocational program. The pre-vocational program prepares the subjects in the following areas:

Quantative and communication skills
Consumer education and transportation
Money and budgeting

This program is followed by the additional program in vocational rehabilitation. Eventually the subjects should be able to enter into full or part-time work placement within the institution or community. Several of the teachers in the pre-vocational program have had previous experience in working with the blind. The experience and facilities afforded the subjects in the pre-vocational program is much more extensive than those in the Greene Blind Unit. Opportunities of this nature provide feedback to the teachers of the Greene Blind Unit and the Peripatology staff concerning areas of deficiency, especially those of self-help skills.

One of the older subjects has been trained as a messenger between the Greene Blind Unit and the institution's school department. This duty has afforded him the opportunity to practice the knowledges and skills he has acquired through the mobility program and has also greatly strengthened his positive self-image.

The above mentioned accomplishments have afforded the ward personnel the opportunity to see the value of orientation and mobility training with consequent achievements by the more capable subjects. In January of 1967, Malcolm E. Farrell, M.D., Superintendent of the Walter E. Fernald State School, authorized the project supervisor to allow independent cane travel to capable mobility subjects. This event was highly significant in that it exemplified the recognition of the mobility program's merits. Prior to January of 1967 subjects were only allowed to travel accompanied by ward personnel or a peripatology instructor. Integration of blind subjects in the sighted pre-vocational program was a direct result of Dr. Farrell's permission. The subjects' successful performances in independent travel has resulted in attention being focused on furhter potentialities of the Greene Blind Unit residents by other institutional educational programs. Integration in September of six more mobility subjects into the pre-vocational school program is an example of the project's favorable recognition and value.

In the initial phase of the mobility project, discussions with ward personnel revealed that they doubted the possibility of the subjects' ability to learn orientation and mobility skills. Informal observation by the ward personnel of individual subject's mobility success has resulted in the recognition of the value of a mobility program.

During the past few months, films depicting the subjects' progress have been shown for the edification of the ward personnel who have daily contact with the subjects. This has enabled the ward personnel to become more involved in the orientation and mobility project and appreciate its value.

Since the beginning of the project it has been evident that close cooperation and communication among all who deal with the subjects is necessary for the success of the mobility program. The rapport between the project staff and the ward personnel has been excellent. The continued succes of the project is contingent upon this important factor.

In addition to mental retardation and blindness, the majority of the subjects have additional handicaps. Among these are paralysis of one or both sides of the body, epilepsy, brain damage, limb deformity, and emotional disturbance. It would seem that the additional physical handicaps have a direct influence on the mobility performance of the subjects, especially those who are partially paralyzed.

Medication prescribed for several of the subjects apparently influenced their functioning. Adjustments in scheduling lessons has been important to insure optimum response during mobility instruction. One subject's hyperactivity and medication have decreased since he began mobility training. He now seems to have the opportunity to channel his physical energy and interests, expending them in a systematic program of orientation and mobility. The subjects' IQ's scored

from 30 to 81, the majority being between 50 and 60. It has been difficult at this point to predict individual orientation and mobility progress on the basis of IQ. Many other factors such as cause and length of blindness, additional physical handicaps, medication, date of institutionalization, and individual motivation amy also be prediction factors.

From observing the performance of the two subjects having IQ's in the 30's there is a possibility that one subject's hyperactivity may have resulted in a low test score dur to the test situation. The other subject with a low IQ has the additional handicap of spastic paralysis and poor balance which has a greater effect on his mobility performance than IQ would seem to have. He is also the only subject with a limited motivation for travel. This is probably due to his additional handicaps.

This institutionalized mentally retarded blind population is a very heterogeneous group which necessitates individual instruction rather than a group procedure. Several times the peripatology staff experienced in working with several subjects at one time. This resulted in a situation which was very difficult to control. The amount the subject learned in this type of procedure was negligible.

One important factor of the project's success has been communication between the subjects' parents and the peripatology supervisor. On May 8, 1967, a state subsidized documentary film was telecast by a Boston TV network. This half-hour film illustrated the positive programs being conducted at the Walter E. Fernald State School. The orientation and mobility program was a major part of this film. Following the TV film, parents of children in the Greene Blind Unit asked to have their children included in this program. Conversation with parents revealed the desire of many to have the orientation and mobility program include younger subjects' orientation to their home environment. There is a possibility that this type of orientation might result in more frequent home visits for the younger subjects. Many parents have been impressed by the mobility progress of their children. All but one of the subjects under 20 years of age spent summer vacation at home. Training of this type had not been anticipated in the original proposal, but reccomendations for future programs should include the area of home orientation.

Now, as the project supervisor is continuing on the second phase of the project and anticipating the last phase, some of the following procedures are to be employed:

Advanced students of the Boston College Peripatology program will assist in the orientation and mobility instruction of approximately fifteen subjects per day.

The procedures of the initial part of the second phase will be employed. Sensory teaching materials devised by the peripatology staff and students will continue to be utilized. Modification will be made and noted whenever it is necessary.

Original evaluation scales now being revised will be employed to describe daily progress of the subjects. Each instructor will make daily reports which will be transcribed for further analysis.

The time spent on orientation and mobility skills be further evaluated.

Testing instruments devised by the peripatology supervisor will be utilized to evaluate mobility progress.

Additional teaching aids will be developed and refined.

The needs of the larger group who are to be integrated into the pre-vocational program will be determined and recommendations will be made to this effect.

Although no definite statements can be made at this time about the success of the project, there are some conclusions that can be drawn. The subjects' reaction to mobility continues to be positive, despite their limited intelligence. The subjects are successfully learning the skills necessary for independent travel and protection. A series of self-help skills now in progress have aided mobility skills and their personal fulfillment of the subjects. The mobility program has served as a strong motivational force in the morale and self-discipline of the subjects. Cooperation of the educational and ward personnel has increased as the project's values gain additional recognition.

Final conclusion that will be derived from computorized data will be printed at the close of the third phase in order to disseminate the information derived from the research and demonstration project now in progress.

A DESCRIPTION OF ONE AGENCY'S APPROACH TO EDUCATING PARENTS AND RELATIVES

By

Francis Ryan

The effect of the Orientation and Mobility instruction offered to a blind person, regardless of his or her age, will in some way be felt by all those with whom the trainee lives. For the visually impaired student who has experienced success in this training, these effects will be positive and should enhance his position and status as a contributing family member. The reverse may also be true. If for some reason the blind person has been unable to assimilate and put into practice the skills which have been taught, the familial relationship may be adversely affected. In such a case, the trainee might discover himself in an even greater state of over-protectiveness and dependency.

Although the orientation and mobility instructor concentrates his attention on the individual, he cannot allow himself to disregard the justifiable feelings of the trainee's family. Without doubt, the dedicated efforts of more than one peripatologist may have gone by the wayside merely because uniformed and over-protective relatives refused to allow the trainee to correctly use that which he had learned. That this possibility even exists at all would more than justify any attempt by the mobility instructor to educate those close to the trainee.

Other members of the family can play an important role in the readjustment or training period. To be effective in this, they should be informed of what might be accomplished and what can reasonably be expected of the orientation and mobility instruction and its relationship to the total training process, being undertaken by their sightless relative.

Perhaps the obligation of a professionally trained mobility instructor do go beyond the preparation and delivery of daily lessons.

Following is an account of one approach taken by the Basic Training Department of the Braille Institute of America in meeting this obligation. It has been submitted to the editors of the LONG CANE NEWSletter in the thought that mobility instructors at other agencies may possibly benefit from our experience. I fully realize that a family conference series is by no means a novel idea. But the suggestions offered may in some way prove helpful in planning a similar program where the problems of orientation and mobility can be discussed with family members.

Orientation and mobility is one of a variety of services and courses of training offered to the blind population of Southern California through the Braille Institute in Los Angeles. As the training of a congenitally blind youngster will obviously be different in many respects from that of the adventitiously blinded adult, this family discussion program was divided into two series. The first series of five meetings was devoted exclusively to parents of children blind since birth or at an early age. The four meetings which comprised the second encouraged two somewhat homogenous groups. Because each participant had questions and problems which were rather common to all within that group, a much freer and more meaninful exchange of ideas was possible in each weekly session.

The following format was used in scheduling the series of nine weekly meetings:

Series I: For parents of congenitally blind children

A. An introduction to Orientation and Mobility and the role parents can take in the training.

B. Orientation and Mobility - Part II

C. Recreational and Physical Education activities and their role in the training program.

D. Techniques in the teaching of the daily living skills.

E. Proper Emotional Development of the blind child.

Series II: For families of adventitiously blinded adults

A. An Introduction to Orientation and Mobility training as it affects the newly blinded.

B. Orientation and Mobility discussion - Part II.

C. Techniques of Daily Living for the blinded adult.

D. Emotional adjustment to the loss of sight.

Such courses as educational-recreational youth activites and formal instruction in daily living and home management techniques are perhaps more closely related to mobility training than most other courses offered at rehabilitation agencies for the blind. Instructors in these fields moderated these sessions. Participation by these staff members enabled the parents and family members to obtain a more complete picture of the total training process being undertaken by their blind relative, and gave added assurance of over-all success to our family-education series. The close relation between active participation in these courses and successful completion of mobility training was explained to the family members.

In conjunction with the mobility staff and teachers were two professional counselors, the staff of Braille Institute. As can be expected, the majority of persons attending both sessions, had very little knowledge of or experience with blindness prior to its onset in their own family. Many were unaware of either the availability or value of a professionally trained counselor or psychologist in helping the family as well as the blind individual develop or adjust emotionally and psychologically to blindness. The parents' responsibility in helping their blind child develop a healthy self-concept and an awareness of his or her role as a member of a family and other social units was stressed in the first series. That proper emotional adjustment can play an important role in determining a potential trainee's readiness for and success in a formal course in mobility instruction was discussed in the second series. Comments by the counselors gave much practical insight to some concerned parents and relatives.

If there had been any doubts in the minds of the mobility staff as to the necessity of these meetings, they were dispersed at the first session. I personally found it hard to believe that otherwise conscientious parents could have accepted the responsibility of rearing a blind child without considering the value or need of specialized instruction leading to independence in mobility. Equally surprising to me was the fact that the phrase "orientation and mobility" could be strange or unfamiliar to parents of blind teenagers; but each was the case with some of those attending the first series. Comments such as: "Of course, our son will get a Seeing Eye Dog - do not all blind people use one?" "What speical head gear should our blind child wear to protect him from bumping into furniture?" And, "How can my daughter and I walk through crowded areas without being separated?" All these questions strengthened my conviction that the education of the family can play an important role in the total rehabilitative process of a trainee.

With both groups of participants, many had heard of this instruction but had no real knowledge of what it involved. Basic techniques and protective procedures as well as the principles of the touch techniques with a long cane were explained and demonstrated. In each series, two sessions were devoted exlusively to the problems of orientation and mobility.

The importance of proper preparation prior to enrolling in a formal course of professional instruction was stressed to the parents of blind youngsters. One question which arose more than once dealt with the problem of what age mobility traing should begin. It apparently does not occur to some parents that instruction of this nature can begin as soon as their blind infant is able to crawl or otherwise relate to his or her parents. Nor does it occur to them that they have not only an opportunity but also the obligation to encourage and develop in this child a desire for constructive curiosity and independent exploration at an early age. These parents were encouraged to aid their children in developing an accurate awareness and understanding of their environment. Any professionally trained mobility instructor could offer suggestions to these parents for fostering correct environmental and orientational concepts in their youngsters. But, first of all, these parents must be made aware that such help is actually available. We, at Braille Institute, feel that our obligations to the parents have at least partially been met by the first of these two series.

The family members attending the series devoted to problems of the adventitiously blinded, were greatly concerned about the safety of their visually handicapped relative. It was evident that some of these persons came with pre-conceived ideas of what their sightless relative could or could not do. This was especially true in regards to safety in travel. Comments such as: "Why should my husband want to bother with all this?" I can take him any place he wants to go," and "Must he carry that cane with him everywhere we go?", indicate how self-defeating attitudes can be fostered in the home if proper counseling and education are not made available.

A well prepared and very inclusive film by the mobility staff helped to illustrate and explain the various aspects of a professional supervised course of orientation and mobility. Through this film and practical demonstrations, these participants were given a greater appreciation and understanding of the necessity for highly concentrated effort and motivation on the part of the trainee as he strives to achieve independence in travel. Every effort was made to impress upon these people that safety and efficiency in travel involved a great deal more for the blind person than merely "waving a can in front of himself".

Most of the people attending these discussions were sincerely concerned about their blind child or relative, and were eager to help him or her in any way possible. As a result of discussion programs such as this, this assistance can be directed toward more positive goals and help to achieve independence rather than dependence for their relative with a severe visual impairment.

ESTABLISHMENT OF THE MIDLANDS MOBILITY CENTER IN ENGLAND

By

Stanley Suterko

It certainly was a distinct privilege for me to have been afforded an opportunity to establish the first non-residential mobility training center in the United Kingdom. The proposal for the establishment of this center was the brain child of two dedicated individuals as a means of introducing and evaluationg the Long Cane and its associated training methodology in England. The invitation to come to England did not develop within a short space of time, but was the culmination of two individuals visiting America to evaluate our mobility methods, and recognizing the value of what they witnessed.

Recalling the events leading up to the establishment of this center, the earliest one occurred when Dr. Leonard[1] was assigned by the Medical Research Council of England to investigate and make recommendations concerning mobility for the blind in the United Kingdom. A neophyte to the field of the blind, he scoured the literature, interviewed leaders and workers in the field, and studied the mobility habits of many blind individuals. Much of his present knowledge concerning the blind was acquired from two of Britain's largest organizations serving the blind, i.e., St. Dunstan's and the Royal National Institute For The Blind. The former is a private organization incorporated to provide all services to the war blinded of the United Kingdom, while the latter is its counterpart serving all the civilian blind. In fact, R.N.I.B. is the world's largest direct service agency for the blind. Its facilities consist of the Headquarters, located in London; a world renown physiotherapy school for the blind in London; an adult rehabilitation center located in Torquay; several rehabilitation centers for housewives; numerous colleges for blind boys and girls; and a goodly number of residential schools and sunshine homes for blind babies.

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[1]Dr. Alfred Leonard was a research psychologist on staff at Nottingham University doing research in the area of blind mobility.

In assimilating this information, Dr. Leonard's attention focused on the United States and their efforts to provide Long Cane training. He then raised funds, enabling him to visit America for the sole purpose of "seeing what they had to offer." Two of the many places he had visited were: the Blind Rehabilitation Center, Veteran's Administration Hospital, Hines, Illinois; and the Institute of Blind Rehabilitation, Western Michingan University, Kalamazoo, Michigan. Upon his return to England he reported his findings, stating he was greatly impressed and recommended that a blind person be sent over for training in the Spring of 1966. St. Dunsten's selected and sponsored Mr. Walter Thornton,[2] a totally blind World War II veteran, with the express purpose of subjecting him to the "American Training Methods" for evaluative purposes. Mr. Thornton, accompanied by his charming and vivacious wife, Margaret, spent four weeks in intensive training. He was introduced to the Long Cane technique at the Hines center by Eddie Mees, one of the charter member mobility instrutors. Eddie had one full week of mornings and afternoons instructing Mr. Thornton. The remaining three weeks he resided at Western Michigan University, receiving training in the mornings and afternoons with periods never less than an hour, or in excess of two hours. His progress through the prescribed mobility course was excellent. At a later date, I discovered he did homework on his own, with his wife assisting. He spent his early evenings reviewing the things we did that day, applying these skills to adjacent new settings, and familiarized himself with the street names. Apparently Mr. Thornton also recognized the value of the systematic training methodology and the merits of the Long "Stick" as the English refer to it. He submitted a favorable report upon his return home, and, challenged by Russ Williams' remark, "the powers to be in England don't care to see this system introduced into the country," he became determined that such would not be the case. Mr. Williams' remarks referred to previous abortive attempts to introduce the Long Cane in England.

Mr. Thornton, in collaboration with Dr. Leonard, submitted a proposal to the Viscount Nuffield Foundation requesting funds to arrange for an American instructor who would establish a non-residential mobility training center. By establishing the center on a non-residential basis there would be no overlapping or competing with the national organizations responsible for providing services to the visually handicapped. A one year grant was awarded to Nottingham University, the fiscal administrators of the project. The policy making group was a committee composed of the following: Walter Thornton, Esq., Chairman; Dr. Alfred Leonard, Research Director; Miss Myfanny Williams, Director of the teacher training program for the visually handicapped at Birmingham University; John Cannon, Esq., Director of Queen Alexandra College for Visually Handicapped; and Miss P. Barnard, Supervisor, Home Teachers for the Blind in Birmingham. This group met periodically, reviewing my efforts and provided direction to the center.

W. Thorton, Esq., as chairman of the group, contacted my be phone in March 1966, and inquired as to my interest and availability for a one year assignemtn in Birmingham, England. This was followed up by an official written request to Western Michigan University. With Mr. Donald Blasch's (Director of the Institute of Blind Rehabilitation) encouragement and suport, the University approved a year's leave of absenee, enabling me to undertake this assignment. After several more exhanges of correspondence with Mr. Thornton regarding the proposed center, the University of Nottingham forwarded a contract stipulating the terms of employment. Noteworthy to mention, one of the stipulations was, "Upon thirty days notice this contract can be terminated by either party." Somewhat shaken by this statement, however, challenged by the opportunity, I signed the contract and in what seemed like a relatively short time, I fould myself (accompanied by my wife and three daughters) sailing for England.

August 19, 1966, we arrived in England, and after several days of getting settled into a new country, I was acquainted by Mr. Thornton with the physical setting in which I was to be located for the next year.

I was assigned a desk in the Principal's Office of the Queen Alexandra College, a residential training center for blind youth between the ages of 17 to 20. Course offerings here included Enginerring, communications skills, personal skills, social and recreational activities. Aside from the space allocation for office and the generous use of corridors and gym, we had no official affiliation. In the preliminary correspondence, it had been agreed to have Dr. Leonard and Mr. Thornton recruit clients and trainee instructors. Their knowledge of the blind population needing and/or desiring mobility instruction could guide the selection of six capable candidates, which would enhance the opportunity for early success. Mr. Thornton introduced me to the clients, three

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[2]Walter Thornton, Esq., is a senior executive with Cadbury Chocolates in Bournville, England. Author of a newly published book entitled, "Cure For Blindness", the first Autobiography by a Long Cane user.

in number. Two youths 18 years of age, and a housewife 35 years of age who had been blind for fourteen years. It became readily apparent that the early recruiting efforts were not particularly successful. One of the youths was totally blind due to retinoblastoma, the other had light projection. The totally blind youth had mobility instrution previously and travelled in the typical English style of mobility. He was about 6 feet 1 ich in height and weighed 17 stone. (One stone equals 14 pounds). He used an aluminum collapsible cane approximately 30 inches in length. This cane is used to trail behind the individual, contacting hedges, wood and stone fences that border the inner shoreline of the footpaths. It is neither employed for any scanning ahead, nor is it long enough to contact the ground ahead of the feet. Trailing of the inner shoreline objects is the preferred use of the cane, because it eliminates the possibility of the cane's jamming up in the picket fences. This method also ensures that the blind person stays on the inside portion of the footpath, this preventing any possible encounters with signposts, or poles situated along the curb edge, and secondly, it eliminates any chance of his stepping into the street. Evaluating the potentials of this mobility aid, it probably was used wisely as the short cane would never detect posts or signs in one's path. In addition, it would never detect any step downs such as holes or curbs, nor was it possible to detect boxes, prams, walkers, etc. The trailing method universally advocated with this short stick impressed me as a very cumbersome and basic method for locomotion.

From the psychological standpoint, I felt it had subtle implications to the user, he is not as good as, nor as capable as a sighted person in the control of his immediate environment. Blind persons in England are allowed to cross only the simplest residentail streets at times when the environment is definitely void of any traffic sounds.

The methods employed in approaching curbs and the crossing of simple streets also seemed to underestimate the capabilities of the blind. On the approach to the down curb, the blind pedestrian shuffles his feet until the foot makes contact with the edge of the curb. Another method frequently seen employed in approaching curbs was to walk till one stepped into the street and then quickly step back up on the sidewalk.

In preparation for the actual street crossing one would, upon reaching the curb, indent a minimum of 10 to 15 feet away from the parallel street. The actual street crossing would also employ a deliberate veer away from parallel street. This was the modus operandi in residential areas. In business areas or approaching streets with traffic he would be quick to solicit sighted assitance before approaching the curb. In fact, the underlying philosophy emphasized to all travelers was to get sighted assistance at the slightest doubt.

The trailing method of travel, though cumbersome, appeared effective in quiet residential areas. In areas lacking hedges, walls, or fences, or in communities with side drives, this method proved ineffective. The individuals would find themselves wandering into the side drives and generally searching for a method to go in a straight line on the footpath. The shortcomings of this method were readily apparent as they tried to negotiate areas containing stores. Most shopkeepers in England display their wares by placing them on the footpaths which often are no more than five or eight feet wide. In traveling through these areas one would be confronted with irregular shorelines, if any, and in addition, the paths would be littered with bicycles, ladders, boxes full of hardware, and just plain cups and dishes stacked one on top of another. At the green grocers (fruitmaker) one would find bushelbaskets or small boxes full of fruit and vegetables occupying at least half of the footpath. Because the short stick method of travel ruled out moving to the curb side, mobility through these areas was at a snails pace. This provided an opportunity for the shopkeepers and pedestrians to rescue and push the blind person ahead through this maze of potential hazards. I had not witnessed anyone using, or advocate the use of, the sighted guide as is done in America.

The prevailing philosophy for the short stick traveller was that crossing busy streets, or negotiating stop light crossings was definitely beyond the capabilities of any blind person. However, it is only fair to mention English towns and cities do not have the number of traffic lights found in American towns and cities. It was somewhat ironical for me to view my first audible traffic light (intended to assist the blind in crossing streets) in Coventry, England.

It was within the milieu described above that I had accepted the challenge to interpret and demonstrate a philosophy, and method, which obviously was not consistent with that of my new environment. Within a short period of time I discovered the youth with light projection had no desire to use a mobility aid be it short or long. Respecting his wishes as an individual, the

training was terminated. The other youth was unenthusiastic about the length of the cane, but he did employ it daily going from home to college. This daily trek involved negotiating a small shopping area where the footpaths were littered with the wares of the respective shops. In using the long cane he learned to skirt the objects by moving out toward the curb side of the footpath and thereby avoid upsetting any of the wares.

The housewife, a very intelligent, attractive young lady, had previously been a secretary to an executive of the British Broadcasting Company. It was apparent from the beginning that she was motivated and eager to travel on her own. She had been blind for fourteen years and not once ventured alone as far as the sidewalk in front of her house. She remarked, "I was tired of being tethered to the house." After daily training, supplemented by her own evening practice, she developed into one of my star pupils. She finally went on daily excursions to do her own shopping, to visit relatives and friends, and she also walked to school to meet her children and attend parent teacher meetings. One day she told me that her original grocer's prices had come down since she began shopping in various stores. Her daily appearances in the neighborhood with a graceful sophisticated stroll proved to be one of the best recruiting agents we had. An interesting sidelight to this story is that when the British Broadcasting Company decided to produce a two-hour documentary on "Blindness in England", she had the major role in the second half (60 minutes) titled, "Independence".

In the early months of establishing the Midlands Mobility Center I came to the forceful realization that the greatest problem was a lack of trainee and trainee instructors. As the weeks, without trainees, slipped by into months, the knowledge that the contract could be terminated by thirty days notice hung over me. I had visions of returning home without accomplishing the goals which I had set out to achieve.

Dr. Leonard, Mr. Thornton, and I then embarked on a recruiting and publicity campaign, to acquaint blind students and sighted potential instructors. As a team, Mr. Thornton and I spoke and gave demonstrations to home teacher groups, administrators, boards of directors, in fact, to anyone in the field of the blind who would lend us an ear. No doubt the effectiveness of the team was enhanced by Mr. Thornton's demonstrated travel effectiveness through totally unfamiliar areas. He is a totally blind World War II veteran and, without doubt, the best cane traveller in the United Kingdom. Mr. Thornton's comment on our initial difficulties was "Recruitment of both blind trainees and potential instructors was difficult in the first instance because of the ingnorance of the Long Cane system, and the prejudice against it, which existed in this country when the Birmingham Center was contemplated."

By the first of the year, our recruiting efforts were rewarded with one additional blind client and four sighted trainee instructors. Two of the trainee instructors were home teachers, coming from Birmingham and Nottingham. The other two trainee instructors were both students in the visually handicapped curriculum at Birmingham University. Sister Barbara was one of the students and I was happy to have her as she would eventually return to the Catholic residential school in Glasgow, Scotland. The other student was Mary Hulme, a former teacher and one of the best instructor performers I had.

A major breakthough came when we spoke to the students in the visually handicapped curriculum at Birmingham University. We immediately recruited two trainee instructors, and added another one at a later date. Other benefits that accrued from this visit were: Miss Williams' convictions that all students going through her program should receive training in at least the basic mobility skills; and her acceptance of the idea of using a blindfold in learning the activities one will be teaching the blind (she now is making her students use the blindfold in the arts and crafts activities). Because her program is the only one in Great Britain which trains teachers for the blind, this setting affords an opportunity for all prospective teachers to learn about mobility. It was also at Birmingham University that I met W. H. Snowden, Esq., Her Majesty's Head Inspector for special education in England. In speaking to the trainee instructors, and witnessing some of their performances, he visited in America at a later date to view some of the mobility programs for blind children. He apparently saw merit in providing this service to blind children as he said he would support efforts in England to provide this service to their blind children.

The areas of training for the trainee instructors varied somewhat. Those with a home teacher background were trained in the area of Queen Alexandra College. The blind clients were also trained here. The students from Birmingham University started their training in the University buildings and progressed to routes on the campus. I felt this would create more interest and generally "spread the gospel". As is my custom, I encouraged these students to practice the skills learned that day during their free periods and enroute to the student center, dining hall, etc.

They did this religiously which served to fulfill several objectives, however, it was not without an interesting sidelight. One of their classmates became very upset at the sight of the trainee instructors using blindfolds. In no uncertain terms he berated them and expressed his disapproval at the thought of anyone making a mockery of blindness. As I had suspected, I learned he was suffering from a visual impairment and would lose his remaining vision in due time. The other students in the visually handicapped curriculum were intrigued with the efforts and accomplishments of Mary and Sister Barbara and kept a close watch on their progress. Occasionally a few of the students could not resist the temptation and attempted walking with the cane and sleepshade to a limited degree. As a result of this we were able to recruit another trainee instructor, and the remainder of the class undertook training in the basic mobility skills.

A major deterrent to successful recruitment of instructors was the question of opportunities for employment. We knew of no agency for the blind, or school, that had positions for orientation and mobility instructors.

About the middle of January, I sensed a turn in the tide. We had four trainee instructors and one blind client on the program. In addition, people were beginning to ask questions about the Long Cane and the training methods instead of hurrying away, as I had contacts with them.

The content of the training program presented to blind clients and student instructors followed much the same format offered mobility instructors at Western Michigan University. The only additional items included were zebra crossings, and roundabouts, which are common in England. The zebra crossings are similar to our pedestrian crosswalks, however, they are located in the middle of the block as frequently as at intersections. They are easily identified by the orange blinking light at each curb, with the street painted in black and white stripes. Theoretically, when a pedestrian places a foot in the crossing the cars are required to stop. One day Sister Barbara got off a bus at the bus stop, which was about 40 feet short of a zebra crossing. As she proceeded to the zebra crossing she could hear the bus creeping along the street behind her. When she got to the zebra crossing, somewhat annoyed by the bus creeping alongside her, she decided to wave him on. The bus driver, not to be outdone, promptly turned his motor off and waited. She then crossed the street. I might add, in spite of being a proficient performer, Sister Barbara received more offers of assistance than all of the other trainee instructors put together. One could see the look of amazement, and the need to help her whenever a sighted person spotted the blindfold and the nun's habit. She also holds the distinction of being the only trainee I ever had, where a funeral procession stopped to let her cross the street. This was unknown to her at the time it occurred.

The roundabouts mentioned previously are circular islands directly in the middle of an intersection. The traffic in going North and coming upon a roundabout would have to make a half circle before being able to continue North. These roundabouts are much more difficult to negotiate than the usual intersection.

Regarding the trainee's crossing busy streets and intersections with traffic lights, when the committee learned of my intentions, I was told this certainly was much too dangerous and besides the blind were not capable of this. In spite of this advice, all trainees experienced independent crossings of traffic lights. I am sure my first trainee instructor half suspected that the American had gone out of his mind.

Speaking of risks--I failed to mention that Nottingham University saw fit to take out a $150,000.00 liability policy for me before I commenced the training activities.

As most mobility instructors know, one's training sessions in the community are frequently enriched with memorable and interesting experiences. I should like to share one of these with you. In my efforts to have Miss Williams knowledgeable about mobility I frequently invited her to witness the activities engaged in by her students, Mary Hulme and Sister Barbara. She always arranged to come out and had seen them at several stages. Her last observation was of Mary, an excellent performer, who undertook the following lesson. She departed from the training center and crossed two streets with blending sidewalks. She then negotiated a roundabout and located a bus stop sign. At this point she got a bus which took her to the Bearwood shopping center. She got off, and making her way to the corner of the intersection, had to cross two of the streets both controlled by traffic lights. From this point she went another two blocks through the shopping center (with its maze of wares) and ultimately located a green grocers (fruit market). I told her I would meet at this point. Miss Williams and I, walking at a distance, observed her going through this lesson, and while Mary was on the bus we drove in our own car. I could tell from the verbal comments Miss Williams was impressed seeing Mary get to the bus, stop, board and alight

from the bus with no difficulties. Then came the stop light crossings; Miss Williams' quizzical facial expressions, intermingled with stares, indicated whe was not exactly enjoying this part. There was no doubt in my mind she was communicating to me, "do you realize what you are asking this girl to do?" In the meantime, Mary executed the crossings perfectly and with just as much finesse negotiated the shopping area. Upon reaching the green grocers I told Mary she was to return to the center again, crossing the lights and getting the bus for the remainder of the trip back. At this point there was practically no conversation between Miss Williams and myself. At the completion of the lesson the only question Miss Williams asked Mary was, "Does your mother know what you are doing?" I believe Mary said she did. Thereafter, I learned upon returning to the University, Miss Williams sat down in a chair and appeared to be in a daze. I believe she had quite a stressful experience that afternoon.

The "Drop Off" lesson was also part of the training schedule for most of my trainees. In attempting to explain this aspect to audiences many people felt this could not be done. In fact, a number of them felt this was merely the product of American publicity. One day the British Broadcasting Company, in making a documentary film on the blind, wished to record the proceedings of a drop off lesson. The blind housewife was selected to demonstrate this after a week's experiences with drop offs. The day arrived when she was met by an entourage of camera men, sound technicians, electricians, director, etc. They affixed a portable mike on her neck so that anything she said was recorded on tape. The television crew accompanied us on our diversionary ride so it did not take too long for her to lose her bearings. When the car was stopped to have her start, the camera and sound men got set up and started recording her every movement and speech. She was asked to verbalize her thoughts and she did a magnificant job, revealing her feelings and the procedures she was going through in assimilating information from the environment. In spite of the additional stress of verbalizing one's thoughts and the fear of failure in fromt of an audiency recording every move, she did a marvelous job. She established a definite position within a short time and walked the remaining six blocks home in record time. They say, seeing is believing, but I'm not sure it was applicable in this instance, because the whole of the television crew kept interrogating her as to how she was able to do this. The director of the film, in previewing it said, "A million people will see it on T.V. and a million people will not believe it can be done."

The television documentary on "Blindness in England" consisted of two one-hoour shows, a week apart. The first portion concerned "Dependency" and the second focused on "Independency". The greater part of the "Independence" portion was devoted to mobility and the Long Cane, with the housewife in the lead role as mentioned earlier.

By Mid-March, I felt confident that we might achieve our initial objectives of creating an interest and need for Long Cane training. No longer did we have to invite ourselves to meetings, as requests from individuals and organizations came in, asking us to explain and demonstrate the Long Cane. At this time Mr. Thornton was in correspondence with Mr. Bob Crouse (a Western Michigan University graduate) concerning replacing me in Aujust for a second year of operation of the Midlands Mobility Center. This certainly was good news.

It was also in March that we accepted two new trainee instructors. One of these was a prominent physical educator in one of the outstanding residential schools for the blind. Her enrollment was significant in that her teachings would be directed to blind children. I consider it a stroke of good fortune to have had her enroll in the course because of the previous experiences she had with Americans. Some years prior to 1966, she met two Americans in Holland who extolled the virtues of the Long Cane, arousing her interest. When she pressed them for further knowledge on this system they refused to show her and curtly replied that she would have to come to America. She then received mobility training in Holland with a system that is a dilution of the touch technique. She had also expressed some very strong feelings against the use of the sleep shade in training. In spite of her experiences and feelings she responded to the recruiting efforts of Dr. Leonard and the contagious enthusiasm of our trainee instructors for the system.

I suspected her real intentions for enrolling in the program were to disprove some of the claims made on the effectiveness of the Long Cane and its training methodology. One of her early comments was, "I don't believe it is as effective as they claim and they will have to prove to me that this system works." Fortunately, her abilities, intellingence, and industriousness permitted her to achieve a degree of success she never dreamed of attaining. In observing advanced trainee instructors venturing into shopping areas, and accomplishing drop off lessons, she expressed a real concern that perhaps she lacked the ability to do this. Eventually she was functioning well in the very areas that appeared threatening to her, and in the process, surprised herself more than anyone else.

Upon the completion of the training she returned to her residential school and immediately inititated a Long Cane træining program for six of her students. What is also significant, in this case, her institution is recognized as one of the most progressive and outstanding residential schools in England. As such, it tends to influence, if not set the pattern for, educating blind children. A real advance will have been made in our field if that statement holds true for mobility.

By the time July rolled around, we had trained a total of five blind clients and seven trainee instructors. We had one additional trainee instructor who was dropped from the course early in the training. These blind clients were valuable assets in the demonstration of the value of the cane for purposes of their movingabout in the neighborhood. The trainee instructors were likewise full of glowing praise for the training methods and eagerly shared their feelings with those who would listen. These things, along with the recruiting efforts of the committee, began to achieve our intended results. We were beginning to get many inquiries and requests for Long Cane training. One of these requests came from the student mentioned earlier, who rebuked his classmates at Birmingham University for using the blindfold. He phoned me one day, asking if he could try the Long Cane. When I mentioned the use of the blindfold, he said he understood this and would be willing to use it in training. This request came the last two weeks of my stay in Birmingham so he had only a few trials with the Long Cane. He did very well under the blindfold and was pleasantly surprised with his achievements and experience.

By the end of July (my scheduled departure time) a waiting list of ten individuals desiring mobility training had been built up. This certainly was a far cry from our beginnings when we were unable to interest a sufficient number of trainee to keep one staff member fully occupied.

In reviewing the Midlands Mobility Center's first year of operation one can note the following accomplishments. 1. The blind individuals who were trained demonstrated the effectiveness of the Long Cane and its associated training methodology in England; 2. Mobility instructors who were trained initiated mobility programs in residential schools (England and Scotland), in agencies and community mobility programs; 3. Initiated the training of teachers of the blind in the United Kingdom so that they will all receive at least the basic skills in Orientation and Mobility; 4. Created a demand for mobility instructors as evidenced by the requests for same from an agency and a residential school; 5. Created a desire on the part of another local authority in England to develop a similar mobility center in their area.

The accomplishments enumerated above certainly could not have been achieved by any one individual, but are the results of the cooperative efforts of many. Some of these people have been mentioned in the article. Unfortunately, some will not be acknowledged to protect their privacy as clients. Others who have contributed to the success of this venture are: W.H. Snowdon, Esq., Her Majesty's Inspector for Special Education; Arthur Phillipson, Esq., Director of Training of the Guide Schools in England, and the staff of Queen Alexandra College for the Blind, in Birmingham, England. To this last group, may I express a special note of thanks for their cooperation and graciousness during the twelve months I invaded their domain.

August, 1967, was the beginning of the second year of operation for the Midlands Mobility Center in Birmingham, England, and growth in demand for services, staff, and space was apparent. In addition to the July 1967 waiting list of ten people, the Royal National Institute for the Blind requested the center to train six mobility instructors for them. The staff at the beginning of the second year consisted of: Mr. Robert Crouse, the American Instructor, who direst and coordinates the mobility program; Miss Mary Hulme, his assistand, a Birmingham University graduate; and Mrs. Joan Seddon, also a graduate of Birmingham University. This year also saw them outgrow the one desk operation and move into their own building, where each staff member has his own office.

Mr. Crouse has recently written, stating he has signed up to stay on for two years with the center. I do hope in the future he has the time, and will be allocated the space, to keep us informed of the development of mobility programs throughout England.

CONCEPT DEVELOPMENT IN PREPARATION FOR THE CANE OR DOG

By

Robert A. Eisenberg

Purpose of the Article

The purpose of this article is to present a systematic procedure used to correct one of several concept deficiencies existing for a majority of congenitally blind individuals--that of the spatial relationship within basic street and city block patterns.

It is hoped that the detailed description to follow will be of interest not only to those professional mobility instructors to whom it is new, but to other persons such as parents, teachers, counselors, and others interested in the education and welfare of congenitally blind individuals. Certainly, dog-guide instructors could and should provide remedial instruction in these concepts before training such a client.

The Existing Problem

Mobility instructors, both with the cane and the dog, have repeatedly experienced difficulties teaching independent travel to such individuals due to their lack of understanding the outdoor environment. Instructors who have taught a number of congenitally blind people to use the cane have probably had the experience of their student progressing nicely in the development of good basic cane techniques indoors, only to learn that during residential travel outdoors the student experiences difficulty applying the cane skills to the real environment. Often lacking are such concepts as: the continuation of streets after they cross intersecting streets, the relationships of the streets and corners at an intersection, the directional designation of intersection corners (NE, NW, SE, SW) and the potential alternate routes which can be taken from one place to another.

As a result of these and other concept deficiencies, failures occur and practice must stop while an understanding of the situation is established through discussion, exploration, examination, and comparison. During this period, the basic cane skills deteriorate due to lack of use and the level of self confidence diminishes due to lack of reinforcing successful travel. Each new conceptual problem introduced failure and in turn, each new failure requires another halt in progress and a regression in travel skills and confidence.

For these reasons it is suggested that where an evaluation of the individual indicated he lacks essential environmental concepts, introduction to the cane or dog be postponed until after these concepts are learned.

You must recognize in reading the following description that it is assumed that preliminary concept development in the areas of laterality (right and left), basic geometric shapes, cardinal directional relationships and basic spatial terminology such as parallel, perpendicular, diagonal, etc., would have been completed at an earlier age or during instruction in orientation and mobility techniques for indoor travel. I believe that within the limits of the individual student to draw inferences and to generalize from past experience, we can use familiar environments as references for comparison with new situations about which we plan to develop a concept.

INTRODUCTION TO A MODEL CITY BLOCK

It is suggested that instruction in concept development begin with the basic unit of the outdoor environment, the city block.

An initial teaching process which experience suggests is useful is to use an object small enough to hold in the hands. Thus the limits can be explored while still maintaining contact with the starting point of exploration. This symbolic city block can be a book, an ash tray, a plain block of wood, or any other rectangular object that is easily accessable to the instructor in the field, as well as in the classroom.

The student is informed that the model represents a city block in that it is the same basic shape as most city blocks. It is rectangular. The block representation has four sides just as has a city block. Each side of a city block is a street so that there are four different streets forming the sides of a block. In order to learn the relationships of the streets in the student's real block we will name the sides of our model similarly.

Initially the instructor will give the student the model and check his ability to recognize its geometric shape and the basic spatial relationships of its parts to each other, such as; opposite sides, corners, and parallel sides. Next the instructor will physically manipulate the student's hands to demonstrate the spatial relationship of the model's sides to the cardinal compass directions. (See Illustration A "Model City Block").

In actuality, one would best relate the directions on the model to the real direction the student is facing so as to reduce the likelihood of confusion on the part of either the student or instructor. For example, the side away from the student might be East in that location. For our purposes we will assume North to be proper. Having located the North side of the model, have the student locate the East, West, and South sides. Practice locating randomly selected sides. When the student can easily and consistently locate the sides in correct relationships to their directional name, he is ready to transpose the names of the streets onto the model in relationship to their directional placement in the real block. Once again the instructor demonstrates that in the real block they are learning about, the street on the North side of the block in Monroe (illustration A.). Opposite Monroe is Melrose, thus it is on the South side of the block. Similar information is then given regarding Vermont on the East side and New Hampshire on the West side of the block. As before, the student is then tested for recall and at the same time given reinforcement of the names of the streets and their directional relationships until he is consistent.

The next step is to demonstrate that in a city block one must walk along the sides of the block, that is, next to one of the four streets because that is where the sidewalks are located. An explanation that houses, stores, etc., inside the block preventing diagonal crossing of the block may be given. Physical manipulation of the student's hands helps to relate these explanations to the portions of the model.

Demonstration of the manner in which one can travel around a block is given in the following manner. Moving the student's index finger along the edge of the model from the corner representing Melrose and Vermont (illustration A.) he is shown in the following terms how one travels in the block. Example: "This is called a corner because two sides meet, just like the walls of a room. As you move your finger along the side of the block just as if you were walking along that side you would be moving toward which side? (North) That is what street? (Monroe) Now then, I want you to continue moving around the block telling me the following things: What direction and what street you are going toward; What direction and what street is behind you; What street are you walking along and on which side of the block is that street?"

When the student has traced the edges of his model reporting as requested, have him reverse the route for practice. Next we can reinforce this learning and check comprehension by having the student demonstrate in a similar tracing manner, giving the same report of relationship as he goes, how he would locate a requested corner from some other corner. Example: "Place your finger at the corner of Melrose and New Hampshire. The trace the route you would take to get to Monroe and Vermont. Give the same information as before, that is what direction and street you are going toward, etc." Determine if the student recognizes potential alternate routes. If he has trouble determining what to do, demonstrate. Then have him select a route between diagonally located corners again, and select an alternate return route.

It is hypothesized that through the steps described the student will have developed a tactual, kinesthetic imagery of spatial relationships similar to those involved in a real city block. He can then use this imagery to mentally manipulate those spatial relationships, and remain oriented while traveling.

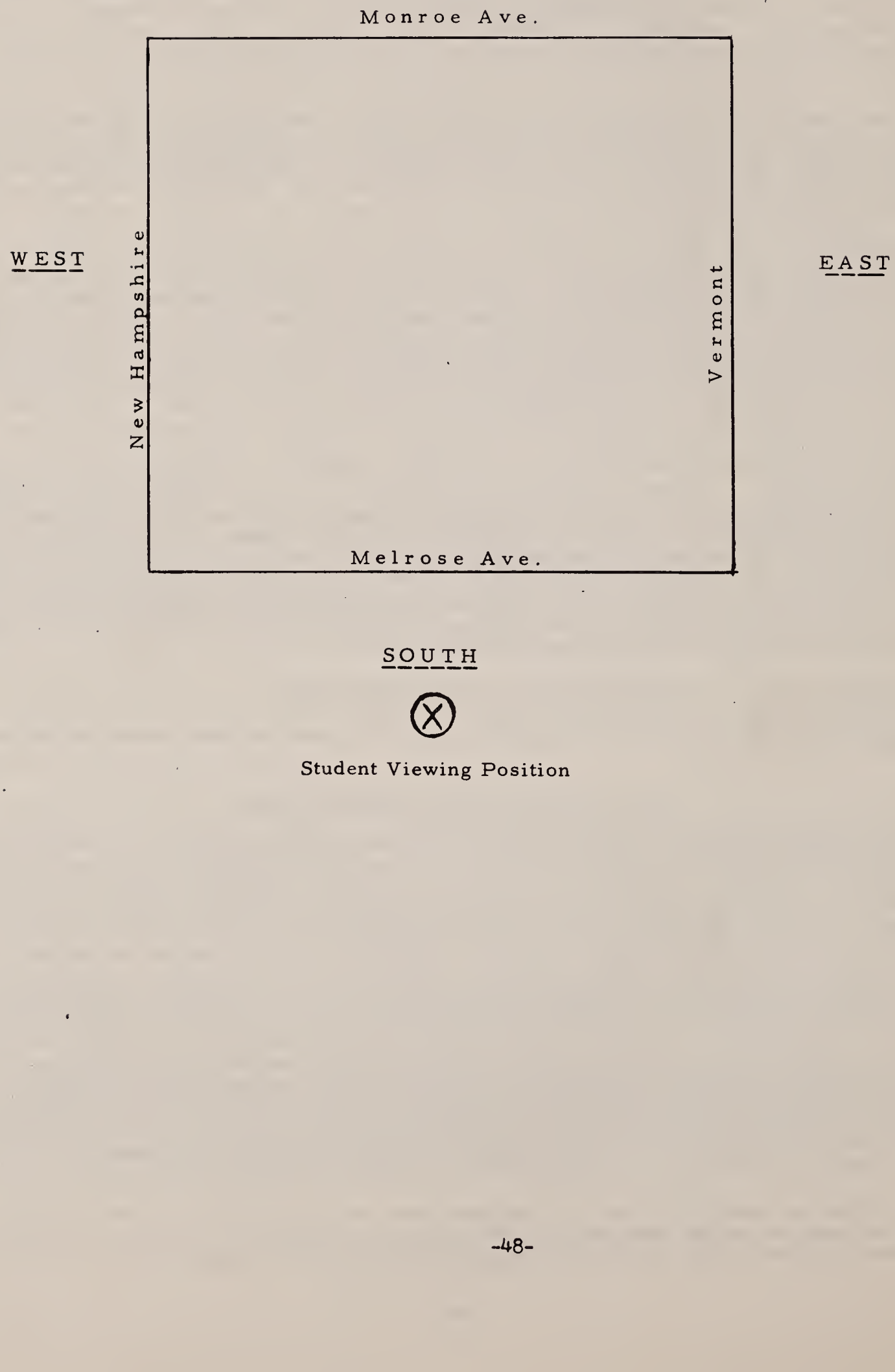
REINFORCING THE TACTUAL-KINESTHETIC IMAGE

Now that we have developed what I purport is a tactual, kinesthetic image of our model, we can determine if and to what extent this information is usable. In the past, two methods have been used. The first to be described seemed at first like a logical preparatory step for transferring the information to the real situation. It has been excluded successfully, however, with a number of students. It will be described so that further consideration and scientific investigation may be applied by those who feel it may be a desirable reinforcing step before moving outdoors.

The basis of this step is the removal of the original tactual-kinesthetic stimulus, the model, and the transfer to a larger environment in which one can walk the directional relationships as he would in a city block. A room free from obstacles along the wall such as a gym or classroom with movable furniture on the sides would be adequate. In this environment the student can be instructed to relate the names of the streets to the four walls, giving him the directional identity of one wall. Then, the student can independently move around the room reporting in the same manner as when tracing the model with his finger. Similarly, he can be tested for ability to locate intersecting sides of the block such as the corner of Monroe and Vermont. All the processes done with the model would be applied by the student trailing within a room.

This method has been eliminated in situations where no such suitable room was available. The advantage to using it is that reinforcement and practice in actual body movement is possible without the time-distance factors involved in traversing an actual city block.

ILLUSTRATION A - MODEL CITY BLOCK



TRANSFERRING THE CONCEPT TO THE REAL BLOCK

In either case, using or eliminating the room experience, the next step is the transition to the outdoor environment. The student is taken under sighted guide conditions to a corner of the actual block learned on a symbolic level. Again following the same procedures he is taken through the process of reporting where he is and where portions of the block are in relationship to him as he is guided around the block. After he is able to remain oriented in this way, he is then asked to direct his guide's movements to specific corners. Example: "We are at the corner of New Hampshire and Melrose - facing Melrose. Direct me to Vermont and Monroe giving me details of our location, direction of travel and our relationship to other parts of the block as we move. Remember to give me this information after any turn."

A concept which can be introduced at this point is the directional side of a street. This concept could be left until after leaving the original block, thus beginning to cross streeets, however, its placement in the instructional sequence does not seem to present learning problems. Referring to the experience in a room, we can introduce this concept as follows: "Remember that when we stood on the side of a room and looked across the room to the opposite side, which was for example the West side of the room we were on the East side at that time. This is logical as East is opposite West. Similarly, when we want to determine what side of a street we are on we need only consier in what direction would we look across it. If we would be looking across the street to the West, like in our room example, then we must be on the opposite side from West or on the East side at present. We need not even look at the street, we can do this mentally. Example: "If I am going South with a street on my right, I know that I would be looking West if I looked across that street to my right; therefore, I am opposite the West side of the street. I am on the East side of the street."

CONCEPTS OF A SEQUENCE OF BLOCKS

We are now able to travel within a city block using directional relationships to maintain an awareness of our position and the spatial relationships of the other parts of the block. The next step is to expand our environment. The following procedure has been used successfully. (Use illustration B, page 50).

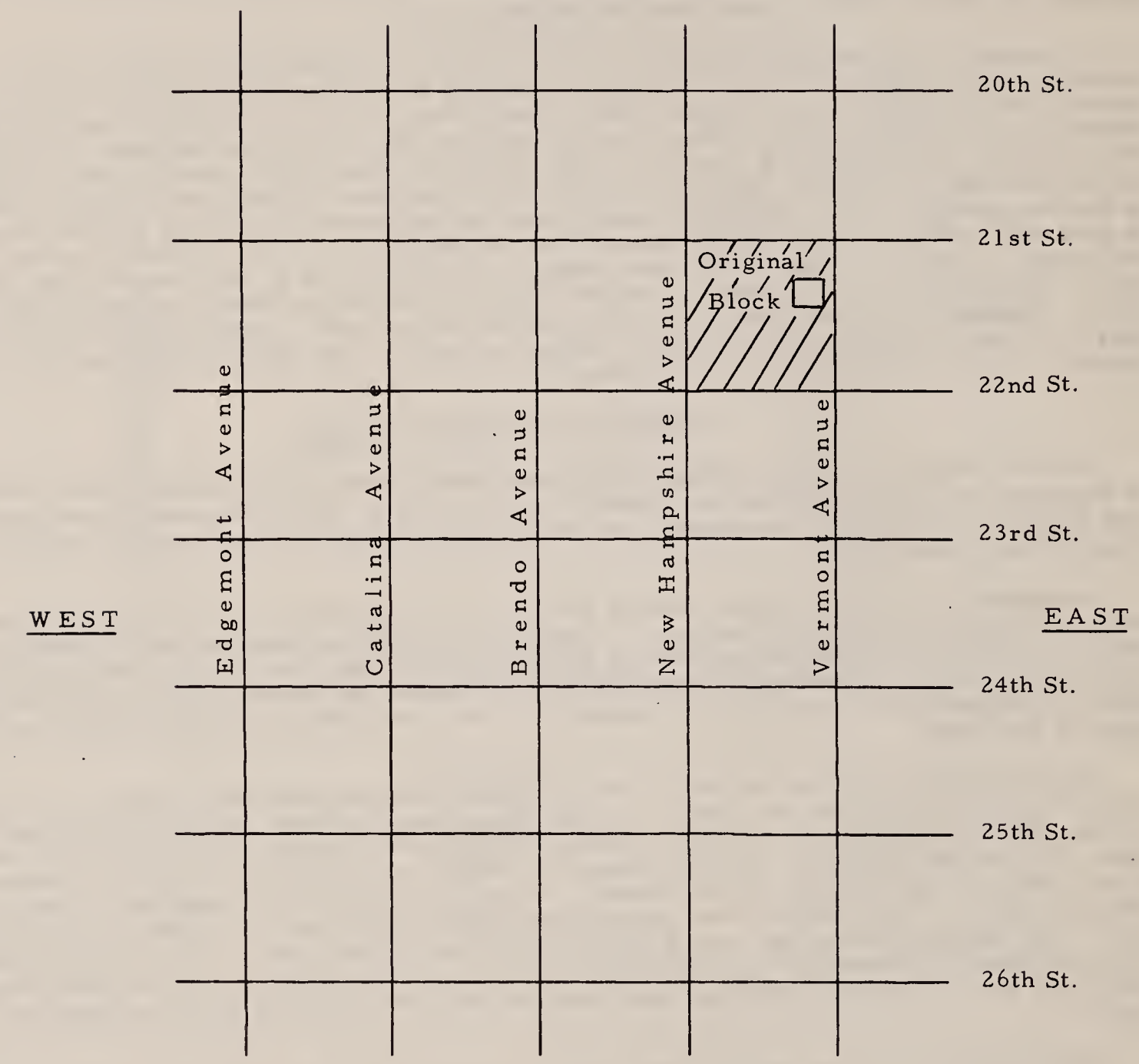
Beginning at a corner of the original block, it is suggested that a blind person learn a series of streets in any one direction. In reality the direction selected would probably be along a route to be used by him such as on the route to the bus line or going toward school, the store, etc. For the purpose of illustration, let us assume our student lives in the "Original Block" in illustration B, on Vermont, between 20th and 21st streets. He has learned the relationships of his block.

We now begin by telling him that as we walk along Vermont going either North or South, Vermont does not stop at the end of the block. It goes for a long, long way, perhaps all the way across a town. If we cross 21st Street and keep going South, we will continue to have Vermont at our side. This we would then do. Having crossed the street and reinforced verbally, "Vermont is still on our left side just like before we crossed," we can now look for an assumption or deduction from the student. "What street must still be one block to our right if Vermont is still at our left?" The average student can draw a proper conclusion at this point. With a less capable student, the answer is given and it is explained as long as we continue in the same direction Vermont will be at our left and New Hampshire one block to the right just like in our original or basic block.

Before going on in the second block we would reinforce the fact that the street we just crossed is behind us. Therefore, we now have some unknown street ahead of us. "As we go South we will continue to have the same street at our right and left, however, everytime we come to a street and cross it, we will then have a new street ahead of us and the crossed street behind us."

"Therefore, in our second block we just crossed 21st and we are facing South. As we go South in this area the street numbers increase so that the next street is 22nd, the next 23rd, 24th, 25th, etc. If we are facing South, then 22nd is which side of this block?" South. "That means 21st has become the North side of this block, because we would have to look North to face it, just like in a room."

ILLUSTRATION B - BASIC STREET PATTERN



The complete sequence of orientation practice and testing done in the original block is then applied to the second block. Following completion of a successful pattern of work in the second block, the student is guided back to the original block. Student and instructor then begin going South into the second block by crossing 21st street. The instructor checks the student's ability to report his progressive position and the relationships of the parts of the new block. It has proven to be a good rule to require the student to report immediately after every crossing all the relationships, so that he does not forget what new set of streets are involved. Similarly, each turn within a block should involve reporting of all relationships. Without this, students often forget their location and relate to portions of the block previously traveled.

Having accomplished transfer from the original block to a subsequent one it now becomes a matter of reinforcing and testing the concept of a sequence of streets and blocks in one direction.

To do this one would then proceed along Vermont going South crossing 22nd, and ask for the relationships of all streets. The student should retain the fact that Vermont is still left, therefore, New Hampshire is still right. Likewise, that the numbers increase going South so 23rd is now ahead of them and 22nd is to the North side of this new block. Of course, if there is failure to transfer, the information would be given again as in block two and testing for transfer would be done in the third block.

Further testing, reinforcement and confidence building can and should take place through lessons having the student first maintain orientation on zig-zag routes made by the instructor within this sequence of streets and then through his independent selection of routes to suggested points in that environment.

BLOCK SEQUENCE IN A NEW DIRECTION

The next step is to introduce laterality to the environment. We now know what is in front of us and behind us from block to block, but what is to the left and right beyond the two streets we have remained between. Uniformity suggests we begin again at our original block but it may not be necessary to achieve continuity or learning. It can well be that other considerations such as a physical goal in the environment, traffic conditions, sidewalk placement or type might suggest a different starting point. With a number of students who received training in the same area, a starting point more central to the entire training area was selected so that immediate reference could be made to several streets laterally. For example, using illustration B, Page 50, if we begin in the block of 22nd and 23rd, and Vermont and New Hampshire, we can begin to learn the sequence of streets as we go West say along 23rd Street and immediately relate ourselves to several streets right and left because we have already learned the numbers increase going South and decrease going North.

Naturally we continue reinforcing the concepts of side of the street, and that the street at your side remains at your side as long as you continue in the same direction, etc. At the same time we can now entertain the idea that if 22nd is to your or North, where is 21st and 20th? Similarly, where is 24th, 25th, etc.

Going West we learn, reinforce, and practice orientation within the first block West of our starting point, then proceed a series of streets West doing as in our North-South series. At this stage we are maintaining a position between 22nd and 23rd as we move back and forth East and West.

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THE GRID PATTERN

Having established the ability to remain oriented in this series of streets we now attempt to tie together the two series. Beginning with our regularly used method of instruction, the guide selects routes and guides the student in an increasingly long and complex series of crossings,

turns and circumnavigations of intersections within the total area of streets learned. At this point he is keeping track of his position by sequentially being aware of the direction of his movement and the four streets that would necessarily relate to that movement at, and following each turn or crossing. Thus, he can be taken beyond the limits of Vermont and New Hampshire as he moves North or South and beyond the limits of 22nd and 23rd as he moves East and West. He may not yet comprehend how to locate a distant point by his own mental manipulation of the relationships. This is not to say some cannot do so at this point; however, many have been found to require one further step.

It has been necessary with many students to initially give them an example of determining how to locate a distant point in a known pattern of streets. Initially, the instructor can suggest to the student that to locate the intersection for two streets in the area, he first need only be concerned with locating one of the two streets. Then he can determine the direction of the other so that he follows the first street located, until it meets the second. For example: From the original block we know both the 23rd is South and Catalina is West. Therefore, if we wish to locate the intersection of Catalina and 23rd we should find one of the streets and follow it to the other. That is, go South to 23rd then go West to Catalina or vice versa.

DIRECTIONAL DESIGNATIONS OF INTERSECTION CORNERS

One remaining orientation concept remains to be included in the series of street relationships necessary for coping with the basic street pattern. That is the directional designation of intersection corners. Not infrequently do people refer to a place being on the Northwest corner of the intersection. Therefore, this is an important concept.

It is explained that the corners of an intersection get their name from their location in relationship to the two streets that meet at that point. The corner's name is determined by which side of each street it is on. For example: The Southwest corner of an intersection is so called because it is on the South side of one street and on the West side of the other, thus Southwest corner. Therefore, to locate a desired intersection corner you need only locate the intersection, then determine if it is necessary to cross one or both of the streets to be on the side of each which corresponds with the directional name. Naturally, practice is given in locating of corners by their directional name designation which also serves to reinforce all other aspects of the orientation training given.

An additional problem which can be included for practice and skill development in the use of directional relationship is requiring the student to direct the instructor to locate objectives in the following manner: "Direct me to the third house North of 24th on the West side of Brendo."

CONCLUSION

When the student, previously unaware of the relationships of streets within an area or even around a single block, is able to consistently direct his instructor to such objectives, he can then reasonably be expected to profit from instructions with a cane, or dog.

Learning to use a mobility aid, whether it is a dog, cane or other device, will provide physical protection but not the ability to travel independently in a variety of settings. This requires orientation and the ability to relate to the environment. Until this ability is developed, little value can come from instruction with a protective device such as the cane or dog, except perhaps for the individual who is limited by need or by low mental capability. These few individuals may learn to function on a limited basis, traveling the few specific routes which meet their needs. For the blind person to travel independently and expand his world, he must understand and be able to relate to his environment.

LETTER OF APPRECIATION
FOR MY VALUABLE ORIENTATION AND MOBILITY TRAINING 1967

By

Odd P. Nymoen

This paper is not intended to be treatise on orientation and mobility. Rather it is, in gratitude, a letter containing reflective thoughts over last year's experience in the orienta-

tion and mobility program at Western Michigan University. However, since the subject is still too big, such a letter will probably seem sketchy and incomplete, regardless of how it is arranged by this writer.

Although the reader may not be greatly impressed by its content, it is to be hoped that some observations as indicated here could form the basis for worthy discussions, and perhaps even for a greatly improved future report on what appears to be a troubled area within the education of the blind.

When I left Norway to participate in a training program for mobility specialists which would require twelve months of training, the greater part of that time in academic study at Western Michigan University, some people were puzzled (or stunned) by my desire to partake in such a costly and complex educational process, only to learn something concerning the specific field in which I had been teaching for the last four years--Orientation and Mobility for the Blind.

My line was really not mobility--there was no such line in Norway--although closely related through physical education. But as the need for organized mobility training became so obvious in our residential school for the blind that it could no longer be neglected, a program was composed, recognized as a necessary factor, and incorporated into the school curriculum. The program was based on literature by Richard E. Hoover. The literature, incidentally, was recovered from a bundle of wastepaper about to be destroyed. (It is my impression that a certain amount of distributed, valuable written material is lost every year, due to the problem of inaccurate commmunication--not only in Norway, but in other countries as well.)

Some time later a need for improvement of our training was clearly seen. I had the opportunity to observe the work of Anta Ryman and Sven Raambin in Sweden, whereupon our mobility program was re-evaluated and systematized to the extent where it was workable in a school situation such as ours. (Anta Ryman of Stockholm, Sweden, participated in an orientation and mobility program at Hines Hospital a few years after World War II and consequently introduced this type of training in Sweden.)

The effects of this training on the development of a large number of individuals have not been recorded, inasmuch as education, training, or employment of the blind in Norway really do not emphasize the need for independent mobility skills. It has been noted, however, that such training is believed to have been extremely beneficial to some young individuals when combined with physical therapy in the form of postural exercises and daily rapid walking and running. The orientation and mobility process then seems to be regulated favorably, to some degree, by feedback products from the physical therapy: the rapid walking, running, and postural exercises which have been carried out under professional supervision. These experiments have been carried out where tension, malposture, and incapability in general physical skills have blocked mobility progress.

The statement made previously concerning the benefits of overlapping physical therapy should not be misconstrued to mean that we have arrived at a satisfactory program of training. We have not. There may be special problems and abnormalities to overcome within our educational system, even before a logical teaching relationship can be developed and linked to this worthy subject. What we had was the above-mentioned information and some original thoughts, worked out and applied to our local situation. For more than one reason, this situation was deprived of the opportunity to examine and consider some of the aspects which profoundly affect this type of training. Lack of authoritative knowledge was perhaps the most obstructing factor, slowing down the development of a sensible program of orientation and mobility for the blind in Norway.

At the present time, in the final round of participation in the program of orientation and mobility at Western Michigan University, I feel that an enormous amount of information has been presented to me in such a way that I have acquired a great deal of knowledge as to the nature of the problems as well as their possible solutions.

On several occasions, however, it has been suggested to me, surprisingly also by persons directly concerned with the education of the blind in the United States, that requirements for teaching mobility skills are unnecessarily extensive, and that the standard could be lowered for the benefit of a larger number of blind individuals. Mindful of the fate that the population of a larger number of visually handicapped suffers in my own country because of a situation with which such a statement is related, I defy anyone to say it would be beneficial to the great majority of so handicapped, or to the population as a whole in a country if steps were taken to cut knowledge and teaching skills in a field where it definitely takes extraordinary ability to deal with special problems. If blindness alone was the obstacle in mobility training, one would not be struggling with such a difficult problem, and a large number of instructors could perhaps

be trained and employed at lower cost, etc., etc. Unfortunately, this is not the case. A myriad of problems are often encountered, which necessarily call for a variety of skills and special knowledge to enter the picture, all contributing to a maximum utilization of the person's potential in the learning process. Techniques for corrections of certain abnormalities may not necessarily belong to the field of orientation and mobility, but the mobility specialist is, by far, in the most strategic position to observe and participate in the investigation and treatment of these problems, which may severely restrict locomotion and affect the person's development in general. Malposture with abnormal gait, for example, the common deficiencies (too often overlooked in the education of the blind) which in particular appear during a mobility lesson, should be taken into account and possibly conditioned out by integrating continuous postural adjustments into the mobility training.

To deal with these problems in an intelligent manner, some insight of the complexity of human locomotion is required. Naturally, the instructor must know something about the fundamental determinants of posture, the movements involved in normal walking--the standard by which abnormalities in gait are compared and measured. Furthermore, the development of attitude, organization of senses and the conceptual area are factors greatly contributing to effective mobility and must beconsidered . These and many other extraordinary difficulties should serve as reminders to assure proper teaching qualifications in a field so essential to the total education of the blind. A reduction of the mobility specialist's requirements, I believe, would be a severe mistake; a step in the wrong direction. In spite of four years of practical experience in physical education and mobility with the blind before I entered the orientation and mobility course at Western Michigan University, I feel that my knowledge in this area is still quite limited. This has to do with the fact that the last year's experiences have revealed how little I knew, and that channels to earlier unknown resources have been opened. Yet I feel quite comfortable in dealing with these problems because I at least have now the power and a fair chance to observe, to investigate, to comprehend, or to partly or perhaps even fully resolve them.

Naturally, a school administration requires some results for which the mobility specialist is responsible. This is not unique, but the subject we are here dealing with is unique, especially as it relates to a school situation. The weaker one is often given a handicap start in a routine program where he is somehow expected to function and catch up with the stronger one. These are the students with whom an accumulation of difficulties seem to resolve around and produce chaos in areas of mobility where progress is foreseen. To them the mobility program has become an unreasonable standard with which their abilities are being measured. It seems necessary here that a reconstruction of a pattern of basic skills must take place before the students can begin routine training on a reasonable functioning level.

Further, locomotion, or orientation and mobility skills, are usually not reinforced and conditioned by influences of home, school or community environment. In fact, it is observed that acquired mobility skills are being conditioned out by influences of the above-mentioned forces. To the responsible teacher, then, this may seem like a lonely, losing struggle. It is possible that such conditions could be fatiguing and build psychological tension which would lead to almost any of the previously mentioned symptoms.

It is not the intent of this letter to analyze or to make suggestions concerning the education of visually handicapped children in the United States. On the other hand, your research and development in special education is of great interest, also in other parts of the world, inasmuch as your systems are about to become the standard with which we in other countries compare and draw conclusions. If we are to understand your approach, we must talk the same language and seek agreement on certain basic points with you.

Most of all, however, I am grateful for what knowledge has been made available to me. It will be a challenging goal to try and catch up with it in practice.

In an effort to better understand my subject, mobility, in the blind, I used to blindfold myself and walk, run, jump, play soccer, and take long trips on skis. I also stayed in the dormitory with the students for more than one year, where I was on intimate terms with them.

These are interesting and valuable experiences, but yet I now realize that there is a lot more involved in conducting a program of orientation and mobility for the blind. To fully realize this, I had to go through a learning process which has been to me a remarkable experience. I feel that my life has been enriched by a supply of refreshing professional knowledge which will enable me to adequately furnish this type of training to many blind individuals in my country, and to carry on with further investigations in this specific field.

For this I am particularly indebted to Mr. Donald Blasch, Director of the Institute of Blind Rehabilitation, Western Michigan University, who made my admittance to the studies at the University possible and wisely directed my attention toward the kind of experiences that I needed. I must also thank my mobility teacher for his constant suggestions, criticisms, and devoted interest, as well as the other teachers for their valuable guidance. In addition, I want to express special appreciation to the many blind students, leaders, fellow students and others who have assisted me and my family in completing an extremely interesting and valuable year in the United States.

REPORT

SURVEY QUESTIONNAIRE - BOSTON COLLEGE GRADUATES

By

Peripatology Staff

We wish to thank those of you who took time from busy schedules to help us in our effort to review the Peripatology program from the vantage point of your collective professional experiences. Our intent is to consider the total program and, to focus on those areas that were indicated as being inadequate.

It is suggested that what might be considered inadequate in the present is not necessarily a reflection on the quality of the basic or early program but, perhaps, is an indication of growth in terms of scope and extent of the field of Peripatology. It is our hope that with your continuing help the Boston College program can parallel this growth. The data is presently being analyzed and evaluated. The results will be used as an aid in planning curriculum improvement.

There was approximately a 55% return of the questionnaire. When viewing the results, do note that of those responding not all:

1. responded to all questions, and/or
2. answered each question completely, and/or
3. responded in accordance with the requested data.

Summary of Results

1. Approximately 60% of the respondents are teachers of Orientation and Mobility and 18% hold related positions.

2. A majority of respondents are or have been employed in an agency that is termed as serving only blind clients. However, this can be viewed in the light of data from other questions which indicate a significant number of clients with multiple impairments - in addition to blindness a majority of adult clients have hearing defects and a majority of children clients were indicated as mentally retarded.

3. Most clients are in the categories of "adults", "children", with a significant number being "partially sighted" (this factor perhaps influencing the suggested need of 'training of residual vision') and the geriatric group increasing in number. The latter two can be a reflection of change in client population per se or a matter of meeting caseload priorities

4. The average yearly caseload seems to have held steady at approximately 22 for the years 1965, 1966, 1967.

5. Comments concerning academic courses enrolled at Boston College indicate that a majority of the respondents view the day-to-day relevance of the course as follows:

"most helpful"	"of some help"	"of little help"
Orientation to Work With the Blind	Educational Psych	Philosophy of Education
Dynamics of Blindness	Research Methods in Eduction	
Medical Aspects		
The Human Senses		

6. Concerning Teaching Responsibilities, approximately 75% of the respondents are involved in sensory training. It appears that this factor is reflected in the data for questions concerning "Practicum Content and Experiences." These seem to indicate clearly the need for more work in areas of sensory training, concept development, and tactual aids.

The analysis of these data seems to indicate a generalized need rather than one influenced significantly by client category.

7. There appears several areas of suggested need but the most significant in terms of suggested course or content matter is in the areas of body mechanics (kinesiology) and training of residual vision. The analysis of these data seems to indicate that the client category did not significantly dictate the type of suggested need.

8. Observation experiences in the areas of children, geriatrics, and emotionally disturbed were indicated more frequently as "inadequate" with all other categories (adults, mentally retarded, various categories of agencies) indicated more frequently as "adequate."

GUIDELINES IN ORIENTATION AND MOBILITY FOR THE INSTRUCTOR OF THE BLIND INDIVIDUAL WITH A HEARING LOSS

By

William R. Curtis

The ultimate objective of an orientation and mobility program for the blind is to enable a blind individual to be a safe and independent traveler. In a recent issue of the Mobility Interest Group Newsletter, Mr. Robert E. Long, former Chairman of the Orientation and Mobility Department of The Greater Pittsburgh Guild for the Blind, stated, that to become a safe and independent traveler a blind person needs to know more than just the use of the touch technique with a cane. Among other things, he needs to have a constant environmental awareness. To achieve this environmental awareness, he must develop confidence in his remaining senses and learn to interpret environmental cues as they apply to safe and independent travel. This can be done effectively through a course in sensory training.

Sensory training, in relation to orientation and mobility, deals with all the remaining senses of the blind person. A strong emphasis, however, is put on the utilization of the auditory sense since it is the single sense that contributes most to environmental awareness.

What, then, of the blind individual with a hearing loss? How can a program in orientation and mobility fulfill the needs of this individual so that he can make the best use of his remaining hearing? The role of the instructor, whether he be the sensory training instructor or the mobility specialist, becomes very important here. He must first be aware of the existence and nature of the hearing loss and its significance as applies to orientation and mobility. This should be accomplished by receiving an audiological report on each trainee or student prior to or in the initial stages of training. Since, in many instances, audiological reports are not available to instructors in the field, an instructor needs to develop "rule of thumb" methods for evaluating an individual's hearing. These methods need not be elaborate. The instructor should observe the individual's reaction to verbal instructions and notice if he turns a good ear towards him while he is speaking. This can be a first indication that an individual has a hearing loss. He can futher investigate the individual's hearing ability by asking him to turn to and walk towards a direct, stationary sound source at various distances. If the individual cannot directly face and walk towards a sound of this nature, it may be due to a significant hearing loss. Temporal, low pitched sounds, such as the evenly spaced clicks of a metronome, can be used to determine if an individual's hearing loss is in the low frequency range. It is important that a low frequency loss be detected since automobile traffic sounds, which are important for orientation and the execution of safe street crossings, are in the low frequency range. Since automobile traffic sounds and most ordinary environmental sounds are in the low frequency range, an individual with a high frequency loss may not have difficulty orienting himself to his environment by using auditory cues. His difficulty may be in interpreting verbal instructions and directions. The person may be well oriented to his area of travel but might get lost or appear confused due to the distorted interpretations of verbal instructions given him. If this appears to be the case, the

instructor should have the individual repeat any instructions given him to eliminate the possibility of any misunderstanding regarding interpretation of verbal instructions.

Even if an audiological report is available, the instructor should evaluate the individual's hearing in terms of practical application to mobility. This should be done by environmental exposure to such things as walking parallel to moving traffic sounds; localizing stationary traffic sounds; estimating the distance between oneself and specific environmental sound sources; identifying building lines, recessed doorways and overhangs by reflected sound; and by identifying specific environmental sounds when complexities of environmental sounds are present.

By conducting these tests in environmental exposure, the instructor can determine the significance of a hearing loss by observation of the individual's performance. If an audiological report is available, however, it can be established that a loss may be significant if it is more than thirty Hz. (I.S.O.). A loss of thirty to forty Hz would be intermittently significant, whereas a loss of more than forty Hz would be constantly significant. In the case of a constantly significant loss, professional consultation should be utilized for consideration of employment of a hearing aid.

Once it has been established that an individual has a significant hearing loss, the instructor will need in some instances to modify his instructional approach. He may have to teach the individual to manipulate himself in the environment to best use his remaining hearing. For example, the individual who has a unilateral hearing loss can be taught to scan his environment by turning his head from side to side in order to localize and identify less obvious sounds. The same person might have to be taught as a one eared traveler in order to parallel moving traffic and to pick up the correct cues for executing street crossings at lighted intersections. This is done by having the individual travel on the side of the street that will enable him to keep his good ear to the parallel traffic sounds. This same individual would have to keep his good ear towards buildings when attempting to locate objectives by reflected sound.

Orientation and mobility for the blind individual who wears a hearing aid presents other instructional problems. A hearing aid is usually employed in cases of conductive hearing losses and its purpose, of course, is to amplify sound. The problem that hearing aids present, although they enable a person to hear, is that they do not enable the wearer to accurately localize sound sources since they do not allow the sound waves to enter the ear in a normal fashion. The microphone for a hearing aid, depending on the make and model of the aid, is worn on one of many different places on the body. These include locations behind the ear, in eyeglass frames, in shirt pockets and in the ear itself. Although the latter of these is the best for localizing sound, none of them enable the wearer to accurately localize sound since none of them allow sound waves to enter the ear in a normal fashion. If only one aid is employed, the individual can, over a period of time, estimate the locality of some stationary sound sources with a fair degree of accuracy with the help of the unaided ear.

Another area which should not be overlooked by instructors is care and maintenance of the aid itself. It would not hurt the instructor working with an individual who wears a hearing aid to contact the distributor of the aid to find out its peculiarites. Many hearing aid salesmen do not give enough information to the user about the aid and its maintenance. The first thing that the instructor should do, especially if the aid is new to the user, is to see that it is being properly inserted in the ear. This is a relatively simple task to perform, but, due to quick instruction from the distributor, many people fit it in askew. If the earpiece is not inserted properly, the efficiency of the aid can be affected and severe discomfort will result. Too often an individual merely stands squarely in front of a wash basin that has a center located spigot and turns the water on near full force. He then adjusts the volume control on the aid until the sound of the flowing water seems to be directly in front of him. This should be a daily morning procedure since the volume is shut off at night when it is not in use. In most instances hearing aid batteries are good for approximately sixty-five hours of use. The instructor should check with the user to make sure that he knows how often to change batteries and see that he does throughout the training program. If by chance a battery fails while on a lesson, the instructor can rejuvenate the battery enough to finish the lesson by holding a lighted cigarette lighter near it for a few seconds. Routine cleaning of the aid is not to be neglected since discharge from the ear can cause a waxy buildup in the earpiece of the aid, creating an obstacle to the transmission of sound. This wax deposit can be removed by inserting a cotton swab or pipe cleaner into the opeing of the earpiece and rotating it a few times. This operation should be done on a regular basis and should be checked initially by the instructor. No water or detergents should be used to perform this operation.

Another category of blind persons with hearing losses that this writer has experienced working with is that of individuals with extreme bilateral hearing losses. Many of these people

fall into the geriatric age group and quite often, because of hearing limitations and other physical problems, these individuals become limited travelers. It is possible that a person in this category can become an independent traveler but a majority of these individuals, due to their inability to recognize, identify and localize auditory cues, will become tactually oriented sidewalk travelers, will need assistance in crossing streets, and will have to solicit more information from the public than will the average traveler.

WANT TO BE A TEACHER?

By

Frederich A. Silver

People involved in teaching often make comments such as "I don't want to do this until I am 50 years old." Such comments lead others to wonder if they belong in the field or if they have been teaching for a long enough period of time to reap the rewards or perhaps they do not recognize the rewards of teaching.

In the field of Orientation and Mobility an occasional remark or two may be heard which in and of itself may be indicative of nothing. Should such comments be the seed of unrest in a potentially good teacher, a surface exposure of some teaching rewards may be the saving grace. Perhaps, even after becoming aware of the rewards some people will continue to feel as they do and if so, C'est la vie. Orientation and Mobility is mentioned because it too is teaching.

First we should sharpen our focus. Teaching is not the soft profession that many think it is. It, like other professions, is suited more or less to some rather than to all individuals. This fact alone may be the impetus behind the unrest which may cause such remarks. This is not to say that ambition for progress is wrong. We are all ambitious.

The selection of teaching as a profession just because we think we are interested, is sometimes not enough. It almost seems that one must have a high interest, low reward ratio in order to survive.

Let us suppose that all of the above has been recognized and accomplished and that the teacher is now ready to reap some of the rewards. What is there for the teacher?

Teaching rewards are like dividends. We receive them only after making an ivestment. This must be an investment of self. Rewards follow along the lines of supply and demand. They are scarce. They are subtle and they are in many instances of short duration. And yet, on the other hand, they are plentiful and precious and long lasting. They are always in demand. The qualities of these rewards vary proportionately with the investment the teacher is willing to make.

The easiest of the rewards to describe takes the form of the direct compliment. This compliment may come from a number of sources but there seems to be a few choice quarters from which the compliment is cherished and the teacher is nourished. These areas usually are representative of those for whom we work and those who are fellow workers. Sometimes the compliment is cloaked in subtlety.

The next type of reward is of the indirect category. This type may be best described by saying that it is a compliment paid the teacher through the students' actions. The actions in point may be the carefree swing of the free arm as the student walks confidently along a sidewalk, or it may be the self-assured correction a client may make before attempting a street crossing. It may be manifested in the new teacher who is not afraid to be sensitive enough to show empathy for his client and is able to do this without over identification. These actions pay a real compliment to the teacher.

As the student engages in the above types of activity the teacher observes and feels proud, Students who achieve success in the application of knowledge, is a compliment to the teacher. It is a compliment although the success occurs in many instances in spite of the teacher. The real teacher knows this and with humility is still rewarded in some degree.

The teacher is also rewarded when he observes that the student has overcome some difficult hurdle. For an example, the teacher is rewarded when the student achieves a degree of proficiency that even the teacher did not envision. This teacher will be rewarded in many little ways because the student had to work very hard for each small measure of success. This is very demanding of the teacher but comes close to representing what Erich Fromm describes as "Brotherly Love." This teacher is refreshed and renewed and rewarded in the highest sense.

Other rewards come in many different ways; the sparkle of insight in the student's eye, the true relaxed smile in the smile, the shoulders that are just a bit more erect, the step that has just a hint more confidence and assurance.

The teacher is also rewarded when students, without provacation, gravitate around him. Not for further knowledge but in a way that says "I respect you," "I am proud to be in your presense."

These are some of the rewards that await the teacher. These are some of the pearls of life which one may reap after an investment. Can you be satisfied with this kind of treasure?

Can you wait long enough to reap the harvest?

IRRESPONSIBLE REPORTING ... A CAUSE FOR CONCERN

By

Robert Gockman

With the increasing amount of material being published by orientation and mobility people who are out in the field, it would seem that we are making progress in our professional growth and in the dissemination of useful information. While it is unlikely that every published article or report will find favor with the profession, it is also unlikely that any current report will generate as much intense criticism as a final report entitled, "Mobility and Orientation Instruction of Blind Person," Association for the Blind of Rochester and Monroe County, Inc., Rochester, New York. The reason for this criticism can be laid to the type of conclusions and statements that are made thoughout the report. One of the objectives of this report is to accumulate a body of knowledge for other agencies considering the employment of a Peripatologist. This report received national notice of completion through the New Outlood for the Blind magazine. With these two factors in mind, this report takes on very important overtones. Administrators and supervisors searching for information must use material which is accessible to them. Therefore it becomes necessary for all of us to be aware of what is being written and for us to challenge that which may erroneously represent us and our vocation.

The following points are stressed very emphatically within the report:

1. This reporting agency, serving a blind population of 1400 clients, does not need the services of a fulltime Peripatologist following 33 months of continuous instructions, or after the backlog of cliants was cleared. (In this case the backlog of clients was cleared prior to the 33 months according to the authors.)

2. A Master's degree program was not believed to be a requirement for teaching orientation and mobility. Individuals who had worked with people readily became capable of teaching orientation and mobility.

3. Ninety percent of the reporting agency's blind population cannot utilize mobility techniques. Transportation for the blind remains a major problem. (While the reporting agency's blind population was used for this particular figure, it is apparent that reference is being made to the general blind population). Actually only six percent of the clients were engaged in orientation and mobility instruction, and another two percent could be projected as capable of independent travel with the use of a dog guide.

It is obvious that a report of this nature is not only erroneous but dangerous. It cannot stand unchallenged.

It should be very clear to every orientation and mobility specialist that his major purpose is to teach independence. More specifically, to teach travel techniques and skills to a visually handicapped person so that he is able to navigate with a minimum of outside assistance. The eventual goal is to teach these techniques so as to permit freedom of movement and also freedom from a continuous program of instruction and constant attention and supervision ... when the training period has ceased. If an instructor is serious about his occupation and he maintains a high level of success, his clients will no longer need his services after completing the training period. Therefore a good instructor with a specific number of clients will eventually diminish that number so that he will effectively rehabilitate his clients, and terminate his employment with his last client. (While this may be highly improbable due to the continuity of referrals for training, technically an instructor is in business to "put himself out of a job.")

The instructor and co-author of the report has lost his employment as described above ... or at least it appears to be so. While the loss of the job outwardly appears to be a tragedy, the speed and efficiency by which he has dispensed of the same should receive recognition. If the report is correct, the instructor has accomplished the following: given 102 clients, he successfully processes or rehabilitates them in a period of 33 months. This is an average of more than three clients per month -- for each month of the instructor's term of employment. Using the statistics available and tabulating them for the periods of time that has been recorded, the results are even more phenomenal, with 524 hours spent in instruction, or approximately one third of the total instructional time of 1557 hours. It would be possible for the instructor to process or rehabilitate approximately six clients per month for the first six months with an average of 15 hours per client. The second period of time reported was a 12 month period of approximately one half of the total instructional time. In this period, a tabulated projection would find the instructor processing or rehabilitating approximately 52 clients or nearly four clients per month (14 hours average per client). The last three months follow a projected pattern of about two clients per month, for a 1/19 total instructional time (14 hours per client).

At no time did the average training time exceed 16 hours of instructional time for the 102 clients.

I would rather believe that the authors used very poor judgement in releasing a report of this nature without first observing situations of a similar nature and obtaining greater knowledge, information, and experience. It is evident that the quality of instruction has been grossly inadequate for the time and number of clients that were served.

Throughout the report the authors state that once the original backlog of clients has been served, the need for a full-time instructor was no longer necessary. This statement should be seriously questioned. On closer examination, this agency serves a blind population of approximately 1400 individuals and during the period of January 1, 1964 to September 26, 1966, 102 clients were seen for independent travel services. Certainly a program of this size must be able to provide employment for several full-time instructors for adequate service. To say that this many people could be effectively seen, serviced and rehabilitated for independent travel is unreasonable, misleading and scandalous to all people who are mobility specialists. It becomes most apparent that the obvious flaw in this project lies with the frequency and duration of instruction. Approximately 65 percent of the trainees have been seen under ten times.

It would be interesting to make a survey of how many orientors would consider 70 percent of their clients to have been rehabilitated with less than ten lessons. It would also be enlightening for the reporting instructor to become acquainted with the standards of frequency and duration that are being formulated for our profession.

It is also interesting to note that the instructor has considered the expressed mobility needs of the individuals receiving training rather than a systematic program of instruction. This concentration of needs, rather than systematic instruction (which would also have included mobility needs) seems to be another obvious fault behind this project. Regardless of the starting point, there must be some sequence of instruction. If the fundamental skills were to be considered first, then cane instruction, and then travel to some of the limited objectives which the client could travel to, how many lessons does this or can this involve? Can the fundamental skills be taught in ten lessons? It is difficult to comprehend how ten lessons or less can be used for more than an information gathering and evaluative process, much less an entire course of instruction or refresher for 70 percent of any blind population.

The two pages that are included at this point are direct quotations and are found on further pages in this report.

VI. IMPLICATIONS

"The implications from this grant as the results show, constitute the idea for two new studies. These studies would relate to two problems, 1) training of mobility instructors and 2) transportation for the handicapped.

A. Training of Mobility Instructors

We seriously question that it takes a Master's degree program for an individual to adequately teach mobility. We believe a mature person able to relate to people and sincerely interested in working with them can successfully teach mobility. We also suggest that, perhaps individuals without a college degree could find this a stimulating occupation.

We believe good health, good vision, good judgement and an ability to work with people are essential requirements for mobility training. We see mobility as an essential program within our agency but doubt that this would provide a satisfactory career for a person with a Master's degree.

In the grant period a therapist was adequately trained to teach limited mobility in two weeks. Teenage volunteers were capable of teaching in one summer period.

These facts make us question the need for a Master's degree program in mobility.

A further implication that perhaps we can answer revolves around services to the blind population. We wonder if instead of new specialists to serve the blind in agencies the size of ours, if it would not be better to train part-time people in general areas of work with the blind.

We envision a corps of part-time staff members representing the agency in the major population areas of Monroe and the neighboring counties. These six or seven individuals would be trained to teach limited Braille, mobility skills, counseling and organization of recreational activities. The time and cost of transportation delays our services to people out of the city.

With the limited objectives that many of our elderly clients seek, we feel a person familiar with programs in their local homes would be a great asset to servicing these individuals.

Three of the four follow-ups indicated further human needs beyond mobility. Recreation, counseling and home orientation should be brought to the individual. We feel it too complex and confusing if these skills must be brought by four different professions. (Peripatologists, home teacher, recreation person, and social worker).

We propose and we are currently seeking through the New York State Commission for the Blind, a grant to train part-time workers in these fundamental skills to serve the visually handicapped. We believe these individuals could offer services in greater depth as they would live in the community.

We could conceive of a person, with a Master's degree in any of the four specialized fields mentioned above, administering this program and utilizing professionals in the other fields as instructors in the training segment of the program.

This program would also establish more productive use of the professional skills and help to relieve part of the present manpower shortage.

The statistics on the number of lessons given per individual indicate that over 70 percent of the trainees were seen under ten times. Throughout the grant period individuals who had worked with people readily became capable of teaching mobility skills through a short course.

This indicates that perhaps with a six week training program, we could prepare a group of individuals for employment. This would be followed by additional training on the job.

We see this as one way to continue and upgrade our services to the blind."

The authors have hit a new low in establishing professional qualifications with the following recommendations: "We believe good health, goood eyesight and an ability to work with people are the essential requirements for mobility training." It seems possible that this same statement could be used as an advertisement for a good hunting dog. While there are orientation and

mobility personnel in the field that do not have a Master's Degree, but instead have earned their skills through painstaking guidance and skill over an extended period of time, very few of them would encourage our profession to retreat to the period of time prior to the Master's program. It is also assured that few would agree with the particularly offensive statement that follows: "In the grant period a therapist was adequately trained to teach limited mobility in two weeks. Teenage volunteers were capable of teaching in one summer period." What do the authors mean by the term adequate, and limited? What are their thoughts on the delegation of responsibility to others? Certainly it does not appear to be in the best interests of the clients.

In conclusion, the entire report takes on the appearance of irresponsible writing and an extremely ineffective program. If some of these implications were merely conjecture on the part of the author, criticism might have been withheld. However, with the support which was given by government financing, the kind of exposure that the authors are evidently seeking and for the clients who surely have been shortchanged in this process, criticism from all professional people should surely find its way back to the authors. If this study receives wide circulation it could only give the impression that orientation and mobility instruction is entering the dark ages. I hope everyone who reads this report in full does everything within his power to counteract this report and raise our professional sights that much higher.

ORIENTATION AND MOBILITY PROBLEMS FOR THE BLIND MENTALLY RETARDED

By

Paul McDade

In a nation-wide survey of 129 state residential institutions conducted this past January by the Boston College Special Education and Rehabilitation Division, questionnaire respondents indicated that there were approcimately 7,500 individuals in state institutions for the mentally retarded who had been classified as both blind and mentally retarded. The survey indicated that less than 12% of the responding institutions were providing this population with some form of educational or vocational programs. In about fifteen state istitutions the number and extent of these programs is unknown.

Probably the most noticeable universal characteristic of this group is this lack of appropriate educational and vocational programs and facilities. Only within the past few years has emphais been put in this direction on a greater scale, namely, under Federal sponsorship. This direction has been in the form of research and demonstration grants.

Before the blind mentally retarded can be vocationally trained or rehabilitated they must first be mobile. The purposes of this Boston College project were as follows:

1. determine if and to what extent blind mentally retarded institutional residents are capable of learning orientation and mobility skills.

2. determine what methods would be most applicable in working with segment of the blind population.

The blind population at the Greene Blind Unit of the Walter E. Fernald State School is composed of both adventitiously and congenitally blind. These two groups are unique in respect to cause, length, and degree of blindness; lenght of institutionalization, motivation for travel, teaching approach, and mobility goals. Many of these residents who were at the school prior to the onset of blindness have retained a remarkable visual memory of the location and relationship of the older buildings and roads. The degree and accuracy of these visual memories have been a positive factor in the student's general orientation ability. With others it has interfered because memories resulted in over-confidence. They put too much emphasis on general landmarks and ignore specific ones.

It became apparent within the first six months that those individuals receiving orientation and mobility were capable of learning and retaining the moethods and techniques. But mobility was not enough, for this training took place for only one hour during the day. The students were not allowed to travel independently within the institution's grounds. In January of 1967, after observing the progress of these students, the School Superintendent authorized independent travel, but nowhere to go.

Vocational placements had not been anticipated in the original grant proposal. But it became obvious that they had to be realized in order to continue mobility motivation. What ensued was the establishment of immediate mobility goals for the more proficient travelers. Possible work placements within the institution were sought and evaluated.

Since that exploratory phase, three residents have been placed within the institution's laundry. Another has been placed in the food service department, and a fifth functions as a daily mail carrier and messenger. In addition, eight younger students have been integrated into a pre-vocational program for the sighted in the institution's school program. The learning rate increased rapidly when these functional goals were established.

To insure continuity, the mobility instructors have worked with school and ward personnel in observing and correcting deficiencies in concept formation and self-help skills. It is now thoroughly recognized that it is impractical and unrealistic to teach independent travel to an individual who is unable to handle such self-help skills as: dressing oneself, tying and buttoning, personal body hygiene, and other social skills. These deficiencies were not inherent, but, rather, the result of a lack of training and independent practice.

Length of blindness has created certain problems. Over a period of years the students have developed travel techniques by a trial-and-error process. They were hesitant and sometimes reluctant to change. Plagued with a fear of falling or becoming disoriented, many rely considerably on others to move about, seldom attempt independent travel in a new area, and have knowledge of only their immediate environments which are usually traversed by following a specific route.

Most of the residents have spent more than half of their lives in a state institution for the mentally retarded, resulting in another problem, an "Institutional Personality". Even though the institution attempts to break down this syndrome through group living, many become self-centered. Their main concern is themselves. Their needs are more important than others' or the group's.

It has been found that the older, adventitiously blinded residents are more motivated than the younger, congenitally blind. Some of these older residents were once occupationally active in the institution's industries. Now with the hope of vocational re-placement they regard mobility as a means to this end, and a way to stay active.

With the younger students there are numerous problems of posture and gait. This is due to an adequate physical education program in the early years as well as physical restrictions within the institution. Patterns have been developed which serve specific purposes in light of their visual loss. Specifically, the everted feet developed from using the toes, rather than the upper extremities, as feelers. The wide body stance provides a better means of support. In correcting these apparently abnormal patterns, substitutes must be made which will provide the same protection as the "bad" habits.

Another prevalent problem among the congenitally blind has been "mannerisms" or "blindisms". One of the primary causes is a lack of purposeful activity to use up excessive energy. There is little if any attempt by institution personnel to counteract such mannerisms. It should be borne in mind that the major role of institutions for the mentally retarded, in most cases, is custodial care, rather than education and training. Most institutions are medically oriented, attempting to meet the physiological needs of their residents. However, those residents who are actively engaged in mobility have shown a decreased amount of manneristic behavior.

The age level for selection of mobility candidates has been twelve years. Like the older residents, all of the younger ones have already spent more than half their lives in a state institution. The effects of institutionalization can be seen in the number and types of experiences these children have had. Above all, they lack the background necessary for growth and development toward their potential. The most notable deficit is a proper body image. Very few have an adequate understanding of the relationships of the parts of the body to its entirety. A first goal is to develop a proper body image, and to relate this body to the environment. The student accomplishes this by locating and identifying parts of his body and of other bodies, and learning

how they locomote with the milieu. During this phase such environmental concepts as shape, form, texture, and dimensions are developed. Unless an adequate understanding of these concepts and relationships is established before the introduction of the cane, problems will ensue which will be difficult to remedy. At least three-quarters of the time allotted to orientation and mobility has been spent on the orientation aspect and the remaining fourth on the actual development of specific cane techniques. Attempts to lessen the time spent on these basic concepts have resulted in poorly oriented travelers.

One problem which is probably common to all institutions for the mentally retarded, is the use of drugs for custodial purposes. The use of drugs such as thorazine and mellaril is common. Due to restriction of activity, drugs are necessary for controlling "acting out" behavior. This affects their mobility progress: reaction time is slowed, behavior is passive, and drowsiness may be noticed. As the drugs wear off, many pupils show signs if irritability. Arrangements were made with the medical and ward personnel to decrease the amount of medication for residents in mobility training. Because these individuals were active, the need for medication was less. Over a period of one year all of those receiving mobility have had their dosages either considerably reduced or eliminated completely. This problem with drugs had not been anticipated, and has been one of the significant learning experiences of this project.

With a minimum of additional training beyond orientation and mobility, many of these residents could be occupationally placed in the institution's facilities. It was estimated in the original project proposal that forty-three percent of the Unit's population could probably benefit from mobility training. After working with these students for three and one-half years, I feel that at least 25% of the 43% could be vocationally placed within a five-year period of additional vocational training is conducted.

A PROGRAM OF ORIENTATION AND MOBILITY FOR THE AGED BLIND IN THE COMMUNITY

By

James E. Hubbard

The purpose of the mobility training project at the District of Columbia's Department of Vocational Rehabilitation was to give high quality mobility training to blind residents of Washington, D. C., who previously did not have access to such instruction. This group consisted of the elderly, children, and those who, for other reasons, were not likely candidates for regular vocational rehabilitation services.

One of the biggest factors differentiating this mobility project from most mobility instruction in the past is that the base of operation was the trainee's home, instead of a rehabilitation center. A number of important points flow from this difference. In most centers the pace of instruction must be geared largely to the length of the blind person's stay. The project mobility instructors could plan their daily instruction with the pace of the trainee's progress. In a rehabilitation center, mobility instruction is given in representative areas of the city or town which may or may not approximate the travel environment of the trainee when he returns home. Lessons began in the trainee's home, and moved with him into his own neighborhood and later into other sections of the community in which he might travel. This flexibility in the project's operation made it possible to deal more realistically with the practical needs of most trainees. With older persons, limited goals commensurate with limited capacity were integrated into the project without strain.

Initially, the screening of trainees was done by a team consisted of the project supervisor, mobility instructor, and social worker. Later, this responsibility was delegated to the mobility instructor. All candidates were interviewed in their home by one or more members of the team. At this time, a general assessment was made of the candidate's interest in mobility, prior mobility training, patterns of daily activity, general health, living arrangements, and home environment. Prior information about prospective trainees ranged all the way from complete medical and psychosocial histories, to nothing but a presumed need for mobility training in the mind of a friend or neighbor. Unless early interviews revealed disinterest or gross physical or emotional infirmities,

arrangements were made to secure general medical, ophthalmological, and audiometric data. This information was evaluated with the assistance of the Department's Medical Consultant, and if nothing contra-indicated further consideration, the candidate's name was placed on a waiting list.

It was anticipated that the effect of blindness upon those with whom the project proposed to work would pose problems not encountered to a significant degree with those receiving similar training in a rehabilitation center. Therefore, increased emphases were placed upon working with the trainee as and where he was found. A sincere effort was made to choose those who could benefit, but no attempt was made to select only those destined to become "accomplished foot travelers". It was agreed that extra time and care would be required with older people in order to interpret properly, the role of the long cane in a realistic approach to their mobility needs.

The effectiveness of mobility training with institutionalized blind persons or the aged blind in the community can be measured when the independence created makes them more acceptable residents or patients. With respect to mental patients, however, an additional potential benefit is evidenced by an improvement in their psychiatric status. The aged blind very often have limited mobility needs. There are instances when the extent of their training will not exceed the outer boundaries of their particular rooms or housing complex if they are residing in homes constructed specifically for aged citizens.

During the span of this three-year project, 198 persons were referred for mobility training from 17 different community agencies. Of these, 61 started training, and 42 successfully completed mobility instruction. A person was judged to have completed training when a level of travel proficiency had been achieved commensurate with his physical, emotional, or mental capacity. Six were suspended or terminated short of some satisfactory level and 13 were currently in training. Forty-six were placed on a waiting list, and 91 were either disinterested or found to be physically, emotionally, or mentally unsuitable for mobility training.

Ages of those referred ranged from 3 to 92 years. Seventeen were between 3 and 20; twenty-eight between 21 and 40; seventy-four between 41 and 60; seventy-four between 61 and 80; and five between 81 and 92.

Ages of the individuals who completed training ranged from 3 to 76. Of these, five were between 3 and 20; one between 21 and 40; four between 41 and 60; and three between 61 and 80.

The majority of the aged blind who were accepted for our program received training with the "long cane". However, they were instructed to limit the use of the cane to familiar areas of travel. Patience must be exercised in working with the aged blind. Generally, a student receives from 45 to 60 minutes of actual instruction on a daily basis. With the aged blind, a training program should be designed so that 30 to 40 minutes are spent in training. The goals set by the instructor are commensurate with the physical and mental capabilities of the individual. It is not realistic to expect the aged blind to be exceptionally proficient in navigating busy intersections, expecially in urban environments. However, if he is physically and mentally alert, he should receive basic orientation which will equip him with this skill if he so desires.

We found that a majority of our aged clients were desirous of bus travel. In many instances this training was neither practical nor realistic. It is relatively easy to walk them to a bus stop and assist them on a bus and have a reliable person at a predetermined location who will assist them in descending the bus. This works, however, it can often place an undue hardship on the friend and bus driver who may assist him, and resutls in making the blind person more dependent. Strong emphasis should be placed on orienting the person to getting in and out of cars and walking with the aid of sighted assistance. Most aged blind people have friends or relatives who will accompany them in keeping their medical commitments. These people usually arrive in cars. This is an occasion in which the aged blind can utilize travel for getting in and out of cars and at the same time exercise some independence.

Many of our aged clients failed to keep many of their out-patient appointments at local medical facilities, not because of an inability to move about, but because clinical and medical personnel were not properly equipped to assist them in moving about once they had reached their destination. This points out the necessity of conducting in-service training programs at medical facilities to acquaint those who provide services with basic techniques for assisting a blind person.

Certain observations were made while rendering mobility training to residents of geriatric units in the National Capital Housing Authority and the aged blind in the community.

1. Their limited mobility needs were attributed more to age and patterns of daily living than to general health.

2. Having these individuals congregated in housing complexes made it easier to work with more trainees in less time.

3. Since the mobility goals of many were confined to traveling in and about the housing complex, seasonal extremes of weather and temperature had little effect upon training.

4. The architectural design of these housing complexes lent itself quite well to training elderly blind people.

5. Following a brief exposure to the results of mobility training with blind residents of a housing complex, the Housing Authority was noticeably more accepting of other blind applicants. It was clearly recognized that blindness, as such, need not make a prospective tenant an undesirable risk.

6. The aged blind receiving mobility training often related better to other members of their household, and they felt less inhibitions when asked by sighted peers to visit with them.

Conclusion:

The results of our three-year project proved very fruitful. Daily mobility instruction combined with sensory training is provided to students in both public and private schools, to aged residents in residential and institutionalized settings, and to aged persons who are not able to participate in our vast agency services. In-service training seminars conducted at medical institutions and public schools often resulted in more referrals and equipped both professional and medical staff to better serve the blind.

Effective July 1, 1968, the mobility instruction and homebound instruction services were merged and now offer combined community services to any person who meets our residency requirements. Our referral sources have expanded and institutions, both private and government, are aware of our program and upon formal request can avail themselves of these services.

THE BELTONE/ULTRA SONIC AID

By

Fred L. Gissoni

On July 9th, I had the opportunity of addressing AAWB Interest Group IX at the Annual Convention in Toronto concerning the Beltone/Ultra Sonic Aid, invented by Dr. Leslie Kay of Christchurch, New Zealand. I have been asked to summarize my remarks for this newsletter. I am happy to do this, but since developments are occurring so rapidly in this field, I feel it appropriate not only to summarize what I said more than two months ago, but also to bring to you the latest available information.

In Toronto, I tried to bring to Group Nine information about my own experiences with the Sonic Aid since publication of the article, "My Cane is 20 Feet Long", in the New Outlook for February, 1966. Since then, several significant steps have been taken. A production model of the Sonic Aid is available. It contains a rechargeable battery housed within the Aid, a detachable earphone cord, means for recharging the battery without removing it from the Aid, a spare battery, battery charger, and clip leads for powering the instrucment from an external battery in an emergency. Ultra Electronics Ltd., of London, England, and Beltone Electronics Corp. of Chicago, Illinois, reached an agreement whereby Beltone will sell and service the device in the United States and Canada.

The Hadley School for the Blind, Winnetka, Illinois, is in the process of releasing a tape recorded course of instruction in the interpretation of the language of the Sonic Aid. This is not intended as a course in mobility or as a substitute for mobility instruction from a competent professional Orientation and Mobility Instructor. It is simply a course of instruction in the interpretation of the language of the Beltone/Ultra Sonic Aid, together with suggestions on patterns of Aid movement designed to enable the user to extract the maximum information from his environment through its use.

Beltone and Hadley are cooperating in a training effort to make it possible for professional Orientation and Mobility Instructors to learn effective use of the Aid. Plans call for a six-day seminar to be held at the Hadley School for the Blind in Winnetka. During this time a limited number of mobility instructors will be taught the basics of effective use of the Sonic Aid, in order that they may return home and teach its effective use to their students. St. Dunstans of Great Britain has produced a set of training exercises and tapes for sighted people who might be teaching the use of this Aid. These materials will be drawn upon during the Hadley/Beltone seminars, along with some material from the Hadley course. We hope that Dr. Leslie Kay, inventor of the device, may even be present for at least one of the seminars.

As the Aid is supplied by the manufacturer, the earphone from which the output signal is transmitted to the user hangs in a direct line with the opening to the user's ear. This produces a "sound shadow" which many people find disturbing. An improved method has been developed for coupling the Aid's output to the ear. This does away the "sound shadow" and does not interfere with the user's ability to receive ambient sound. Although a slight bit of custom fitting must be done, this improved method is not nearly as involved as the making of an ear mold.

In teaching the effective use of the Beltone/Ultra Sonic Aid, it is important that the instructor be able to hear the signal which his student is hearing. At the same time, the instructor should not have to be "tied" to the student by means of an extra earphone and cord. So it is that an F.M. link has been prepated. The student carrying the Sonic Aid will wear a tiny F.M. transmitter which broadcasts to his instructor the same signals which he, the student, is hearing. In this way, the instructor is free to observe him at a distance of more than 100 feet while at the same time hearing by F.M. radio exactly what the student hears from his Aid.

Six years ago, I undertook considerable efforts on behalf of the abacus as a calculating device for the blind. I was not then and am not now a mathematician. Nevertheless, I taught the use of the abacus to many teachers of mathematics. I did it in order that these professionally qualified people could add this skill to their professional skills and increase the scope and quality of services which they could offer to their students. In undertaking any effort in behalf of the Beltone/Ultra Sonic Aid, certainly, I do not intend to teach mobility skills to mobility instructors. I, personally, have used the Sonic Aid for almost 42 months. I believe it to be of real value to those willing to learn to use it. In making available to mobility instructors such knowledge and experience as I may have acquired, my intent is to enable O & M Specialists to add to their professional skills, thus increasing their professional status and, more important, increasing the services which they are in a position to offer their students.

CONCEPT DEVELOPMENT - "THINKING OUT LOUD"

By

Hugo R. Vigoroso

I would like to share several thoughts with you concerning concept development as relevant to a congenitally blind person and Peripatology. This presentation is not intended to be a dissertation or exposition but, as the title indicates, just some "thinking out loud". Perhaps what follows is known material to many of you but should it be of any assistance to any of you the writer would consider this presentation as productive and contributory.

The categorical format that is used here is essentially for convenience of presentation; in fact, each section is interdependent and interrelated with the others.

I. CONCEPT ANALYSIS

Perhaps one of the first things an instructor should clarify for himself is, "What is a concept?". At the risk of being presumptuous I include one definition for our reference When an individual can abstract a common element from several sensory experiences and uses this abstraction as definition of a class and, when he can represent this generalization by a symbol, he has formed a concept. Before it is fully established its validity must be tested by behavior predicated it; such testing will lead to acceptance, modification, rejection.

The next step perhaps should be to analyze the concept or concepts in question; that is, describe the concept in "terms that will translate into specific manipulation of environmental variables."[1] "Our description of a concept allows us to specify the minimum set of essential discrimination that a learner must make to avoid confusing instances of a concept with instances that do not satisfy the concept requirements."[1] The analysis of a concept is not to be confused with the learning of a concept. One might say that the analysis provides us with the components or properties of an object or environmental context which suggest tasks by which a person can interact with and learn about his environment and self as an object and instrument in said environment. As an example, let us consider briefly the concept "rectangle" - this perhaps is presented often as a description of the pattern of a city block. A quick analysis would indicate that its parts include lines which are straight, extending in particular directions, in the positions of horizontal and vertical, meeting at their terminal points forming corners (angle) and relating to each other in parallel and perpendicular fashion. Also, two of the lines are longer than the other two. One can infer from this tasks that would help in experiencing and learning the concept "rectangle".

II. CONCEPT LEARNINGS

Since it is the mind of the blind person that we attempt to affect it would seem that we must try to understand how things look to them. I believe that a number of basic and essential factors involved in learning in general and the learning of concepts in particular have been pointed out by REVESZ[2], VAN WEELDEN[3], BOLDT[4], GARRY and ASCARELLI[5], LOWENFELD[6], CRATTY[7], and RUBIN[8]. Their comments regarding input (reception), processing (memory, cognitive manipulation) and output (behavior) are critical. I might suggest several words that emanated from and perhaps would suggest the relevance of this material - continuity/extensionality, completeness/totality, detail/clarity, permanence and perspective/alternatives.

There is no sensory channel that offers the totality, the detail, the simultaneous reception of data and, the perspective like that of vision. Yet when we ask a client to "see" a route, a room layout, an intersection, etc., isn't the total spatial image the expected (requested or implied) response? It would seem that we are expecting the student to translate a temporal-motor-sensory experience into an integrated spatial arrangement. Perhaps this is something similar to the processes and difficulties evident in the task presented visually of mentally joining what looks like a collection of dots but which in fact represent the figure or pattern of an object or person. Both involve at least the following: recognition of discrete data, closure - mentally filling in the gaps between data, memory and imagining an appropriate totality from a partial presentation.

Assuming that these statements are valid they suggest that the use of sound (additional suggestions are offered in Section III) might aid in the areas of continuity, completeness and perspective. As an example, if one is working with the idea of an intersection one could have the student remain stationary and correctly located/aligned on one of the four corners (actual or simulated); the instructor, emitting a sound (voice or instrument), could produce the travel path of pedestrians/vehicles while offering specific spatial terminology (see Section IV) of the activity. You might also consider having the student "tracking" motorically (with hand/arms) thereby allowing for a multi-sensory experience and involving the self as an integral part of the whole in terms of the activity and environmental arrangement.

I would like to offer several general statements that might suggest a perspective when considering the process of learning concepts.

1. The learning of concepts is always dependent on the context in which they are presented.
2. Breadth rather than intensity of training appears to be the key to concept forma-

tion; there is a close relationship between kind and amount of sensory experiences and the adequacy and variety of concepts.

3. Efficiency of concept attainment is associated with higher I.Q.
4. Sensory information is discrete data and remains so unless teaching lends organization and structure to it.
5. The blind child should be guided toward the development of a habit of active attention to all aspects of his environment.
6. According to some theories, language is the key determinent of the devlopmental sequence of concept attainment. It determines how the environment is discriminated, what objects can be integrated and what kinds of abstract concepts can be invoked.
7. There are several theories concerning the capability of the human organism to learn concepts of space:
   a. spatial relations is a primary ability
   b. awareness of space is "a priori"
   c. space is systematically constructed by the syntheses of body movement, tactual sensations and constructive thinking.
8. Perception is a conscious activity originating with the awareness of an environment of experience and ending in cognition.[5]
9. Perception of self, orientation, object perception and language are essential aspects of spatial organization.[5]
10. Concepts should be functional, that is, operational to the student.
11. The kind, amount and limits (in terms of discrimination and spatial extension of the latter) of information conveyed through each sensory channel is quite specific to that channel. The question of integrity in the translation of data from one channel to the language of another is critical because of the multi-sensory approach of the Peripatologist.
12. The world of direct, relatively definitive experience of a congenitally blind person is as far as he can reach with his arms or cane with a rather incomplete indefinite extension by sound. This offers an inconsistency perhaps with four questions asked of the blind person by the Peripatologist, "Where are you now?", "Where is your objective?", "Where is your starting place?", "What is the relationship of each to the others?".

It may be obvious to many of the readers but perhaps by way of a reminder it would be appropriate to refer to the relevance of the stages and direction of growth and development of the human organism as indicated by the discipline of developmental psychology. This is especially important when considering the pre-school and elementary school years.

III. TACTUAL EXPLORATION

A tactual aid/model is very often used when attempting to guide the learning of a concept. Much has been said concerning maps[9] and models.[10,11] I would like to suggest several supplemental factors for your consideration:

1. Development of form or shape perception depends upon learned coordinates of space.
2. Form perception has several stages:
   a. globular - no specific parts or relation of parts.
   b. analytic - differentiation of parts.
   c. synthetic/structural - integrated form.
3. In the exploration of an object one must negate subjective sensory experience in order to establish the external nature of the object.
4. In exploration one must differentiate the behavioral characteristics in the identification and localization of a point, linear data and a real data; e.g., a locale-symbol on a map versus a guideline versus a sidewalk.

Perhaps we can make inferences as to the relevance of these statements to the earlier comments concerning concept analysis and concept learning; that is, if the blind person is aware of the spatiality and motor patterns characteristic of his body; aware of the predictable, objective properties (physical, sensory, spatial, structural, functional) of an object or area, then, with a learned exploration procedure the chances of finding what he is searching for and interacting effectively with it are increased. I would suggest that this principle is also relevant to sensory activities other than tactual.

Several specific thoughts that might be of some help when tactual aids are part of your lesson presentation:

1. When one is exploring, the use of a reference point or "home base" can aid in the synthetic/structural level of activity; e.g., keep one hand in place while exploring with the other, relating each segment of the experience to the stationary hand. Later development would include two primary reference points - the beginning and end locales of the pattern.

2. When reading a map, designate the finger nail or some other specific factor as representing the facing direction of the student. This seems to more closely simulate the purposeful, related activity required of the traveler on a route. It also offers an opportunity to observe and discuss a spatial perspective that is not that of the student; e.g., the student may be moving his hand from East to West but the person on the map may be moving from North to South.

3. Consider a step intermediate to a tactual model and the actual environment - one that can help the student expand or magnify the model and integrate self with the model. As an example, have ropes, tables or the line (also consider arranging material such as 1/4" plywood on the floor to simulate a desired pattern) represent a route or an intersection with the total aid being of such a size that the student is able to reach, make contact with and explore with his hands and/or cane (later the size should be expanded in order to focus on the locomoter activity; e.g., walk-on patterns, baseball infield, basketball court, etc.). This exercise and that suggested in item two immediately above offer an opportunity to have your student operate in a related but simulated context involving mental travelling, problem solving and spatial reasoning in a setting reduced in risk and in which the student's concern for cane technique is eliminated.

Another reason for this intermediate step might be that most tactual aids present the object or area entirely in front of the blind person; this is inconsistent with his actual situations.

Concerning the exploration of a map, I might add that if the properties of a map are such that the student is guided by a groove or a double line which would provide a track on which to run or a line high enough so that the "reader" can run his finger along side and against it, it seems to enhance the focusing on the objective spatial characteristics of a map rather than the subjective searching activities of the student.

IV. CONCEPT GROUPS

Listed below are several groupings that perhaps could be considered essential to mobility. The order of presentation is feasible but perhaps not appropriate for certain blind students because of experimental history, developmental level, etc.

1. Line/Plane
   a. type - straight (flat); curved
   b. position - vertical; horizontal; diagonal
   c. relation - parallel; perpendicular; diagonal (includes angle, corner, degree)
   d. division of plane - whole; on half (right/left; front/back or top/bottom; quadrants of front right, front left, back right, back left)

   Note: You might utilize print letter patterns as a means of learning/testing the above. Also they may later serve as analogs to a route or environmental arrangement.
2. Shape/Form - for our purposes consider shape as two-dimensional and form as three-dimensional
   a. shapes - e.g., square, rectangle, circle, triangle, oval. (to be considered both as separate entities and joined one with another)
   b. forms - e.g., cube, cylinder, sphere, cone. (to be considered both as separate entities and joined one with another)

   Note: As part of "shapes" one might include the concept of size. This might extend later into locomotor pattern or maze learning. Perhaps it is important to state here that it has been suggested that there are three basic methods of learning a maze: motor - basically a conditioning process; visual image; verbal - a list of directions, turns, etc.[12]
3. Spatial Organization and Orientation[5]
   a. position
   b. location
   c. direction
   d. distance/dimension

   Note: Include relationships of each to the other.
4. Body Image[7,14,15] - the application of IV 1,2,3 above to the human body as on organism interrelated with itself and its environment. With pre-school and primary level children, it is important to have the child experience as much as he possibly can in the areas of motor activity and awareness of activity in the environment. This is basic to all future development of the child.
5. Environmental objects and arrangements - the application IV 1,2,3,4 above to the actual environs.

We can include as development of this area those factors that might affect the safety and/or effectiveness of the blind person; rules, regulations, systems, e.g. - traffic laws; community facilities, e.g. - post office, cobblers, drug sotre; usual and unusual activity or pedestrians and vehicles, e.g. - people walking in street and against lights, trailer trucks "jumping curb," etc.

V. A FRAME WORK - for the presentation of concepts. The listing is arranged in a suggested sequence and follows a format similar to that presented by Cratty.[14a]

1. When first presenting a concept utilize whatever avenue is appropriate to the developmental level of your student, e.g., definition; analogy; motor sensory experiences such as those suggested by Engel[13], Cratty[14], and Ohio Dept. of Education[15], and combinations of these. It is important to keep the body (self) as the central point of reference and/or analog.

   If and when appropriate, have the student pair, precede or follow his activity with verbalization of some utilizing descriptive and/or associative language. This perhaps would aid in the development of an active, definitive approach to his interaction with the environment.

2. Experiences indicating the relevance of the concept to self as an object ('object' as used here and in the sections that follow indicates a person or thing)
   a. identify and localize tactually - places, parts, forms, etc., of body.
   b. relate self to an object - the object is to be identified by the instructor but with no specified spatial characteristics.
      (1) first provide for extension with no physical contact; e.g., "point the front of you against the wall", etc.
      (2) then, provide for extension with no physical contact; e.g., "point the front of you to the sound", etc.

3. Experiences to relate object to self - no specified spatial characteristics identified concerning the self.
   a. "touch the right side of the chair"; "place the book on top of the table", etc.

4. Experiences to relate self and object with both having spatial characteristics identified.
   a. move self or object, not both; e.g., "place your right side against my back"
   b. move both self and object
      (1) change position of self and object; e.g., "if you sit and I stand, who would be taller?"
      (2) change location of self and object; e.g., place the chair in front of the window and stand behind it".
      (3) change direction of self and object; e.g., place the chair so that it is facing the window and you stand to the right of the chair facing the window."
      (4) change distance of self and object; e.g., "standing back to back let us each walk four paces, how far are we from each other in term of number of paces?"
      (5) combination of (1)--(4)

In closing I would like to suggest that the above has many ramifacations. Modifications would be required to tailor a presentation for a retarded person, a partially sighted person, a person auditorily impaired, etc. However, perhaps some of what is suggested above can be considered as seeds, as it were, or that which can be used as material from which a modication is formulated.

I would like to suggest and invite the reader to react to and/or offer some of his "thinking out loud" directly to me or, with your permission, to include perhaps such material in a future issue of the Newsletter.

IMAGE OF ORIENTATION AND MOBILITY

By

C. Warren Bledsoe

We hear a great deal these days about what good questions this or that incendiary person is asking. I am interested rather in people who have good answers. But there is something contrary in human nature which gets all stirred up when confronted with a declarative sentence. And even if you think you have a very good answer of some kind, very often the best way to convey it is

by somehow turning it into a question and getting people to arrive at the conclusion with a sense of discovery, of having gotten it on their own. I must say that I am irked by this way of doing things when I know about it. It is wily, crafty, and not the way to treat an audience you respect. So out of respect to this audience I am going to proceed with some declarative sentences on the topic of the afternoon, presuming that I am up before you because somebody has assumed I should say something. And I never like to disappoint anyone who assumes that.

Much has been said about images at this convention of workers for the blind, a sign that one and all have gotten over initial supersensitivity which people feel about using visual words where blind people are concerned. All sighted workers for the blind are in the business of holding the mirror up to nature and then converting the image on the mirror into something which can pass through the sensory channels of blind people. This naturally includes the image of the sighted individual himself. In this connection, if we had any Scotch parents or grandparents, we are reminded of Bobby Burn's lines, "Oh, wad some power the gifties gie us to see ourselves as ithers sees us. Twould from us many free us and foolish notion."

I suppose it is no secret that I am a little bit of a traditionalist. And I would like to begin by tracing the ancestry of the mobility instructor, going to some source documents.

Recently, I had a communication from Father Carroll in which he said, "I have not given up my belief in history or its importance for the world. Instead, I merely say that most of the history we have known is not applicable for the discussion of the present day." This comes close to the fad of talking about "relevancy". And the thought comes to me that we need more to ask whether our discussions are applicable to history than whether history is applicable to our discussions. In this connection I concur with Woodrow Wilson's dictum that "few things are more benighting than the condescension of one age for another."

I would like first to pull out a quotation which brings into relief that very first teacher of the blind in the modern world: Valentin Hăuy--brings him into relief in a paradox, for he is described by another great teacher--Samuel Gridley Howe. But it is Howe turned administrator, and at least as he penned his description of Hăuy, he is completely the custodian of institutions, their budgets, premises and public relations policy, sour and a little cruel toward the untidy-seeming and unconventional guise which the teaching process often has when practiced by a great teacher. Listen to what Howe, the wheeler and dealer, says of Hăuy, the teacher: "Valentin Hăuy has genius, generosity and zeal, but he lacked common sense; and utterly failed as an adminstrator of affairs." Howe then goes on to describe the odyssey of Hăuy with a steady undercurrent of disapprobation, bursting into occasional flame: "He dedicated a book to his royal master called, 'Essays Upon the Education of the Blind'. This was printed in relief, nominally by the blind boys as the new school, but really by Clousier the printer; the boys, perhaps, pulling the press. This book (which is of little value) was translated into English."

So on for several more paragraphs, during which Howe, who fought for Greek liberty, can hardly be recognized writing of Hăuy, "He took to wife, and to the institution, a common market girl."

What a caution to the aging--this old man of 1874! Himself once a no-holds-barred teacher, who put on a fencing masque to get through to Laura Bridgman, and later apologized to the public for it--but cannot control his irritation with Hăuy for the individuality and waywardness which often are a part of the natural born teacher's make-up!

Nevertheless, in his final paragraph Howe returns to the high seriousness characteristic of him, saying of him: "The fruit-seeds Hăuy sowed have multipled, until all the principal countries of Europe have their special institutions for the instruction of the blind." True indeed. For Hăuy most exceptional teaching was that most difficult tuition of all: the teaching of status individuals. He was an excellent counselor of state on the subject of blindness. There is a Courvoisier advertisement lately seen in color which shows Napoleon and Talleyrand, meeting with the Czar Alexander and the King and Queen of Prussia. Each of these heads of state had counsel on the subject of blindness from Hăuy, and each attempted to follow Hăuy's teaching. Not much was accomplished with Napoleon, and the Czar's entourage convinced him there were almost no blind people in Prussia, but the Prussians backed an educator chosen by Hăuy who was to play a leading role in European work for the blind at the time.

Thinking of Howe's loss of resilience suggest to me a new meaning for the ancient commandment, "Thou shalt not make a graven image." It is not directed so much against the veneration of statuary as against the hardening of our ways and hearts into inflexible roles which we think we must play with undeviating faithfulness to a pattern which we ourselves formed in the first place.

And it is this we must all think of as we consider the image of orientation and mobility. There are several documents I would like to cite in attempting to capture the evolution of the mobility instructor. The first was written by Dr. Richard Hoover in the 1940's, while the Army program was in full swing:

> All kinds of men make good orientors. Good instructors of the blind derive a large part of their strength from knowledge and from traits not at all peculiar to persons who work with the blind. One excellent orientor was a truck driver in civilan life. Another was a life insurance salesman, another a musician, and another a golf professional, and another a farmer. There is plenty of room in this field for a man with no particular specialty to be carried over into the field if he is used to managing things and getting things done.
>
> A good orientor must be the kind of man who can be allowed to use his own initiative to a great degree and who has sense enough not to abuse this privilege. Some orientors at Valley Forge have been successful by always being serious with the patients, others never being serious. Each man must develop his own methods.
>
> The must successful orientors seem to get the best results by avoiding an air of proprietorship with the patient, staying in the background as far as possible, letting the patient teach himself whenever that is possible. The orientor's job is to find out what the patient wants that is constructive and then help him to get it. He must bear in mind that despite all the newspaper stories to the contrary, there is never a time when a blind man does not need somebody to be his eyes for him in certain activities. The orientor must, therefore, keep watch on a patient who has grown independent and make sure that he does not suffer lack of necessary aid through pride.
>
> The orientor must be careful not to add to his responsibilities by worrying over his patient. He should think for him and work for him when he is on duty and relax when he is not. Nearly every orientor some time or other reaches the point where he thinks he is the only person helping the blind. He should then have a three-day pass.

Another view of the mobility instructor of that time is given by the opthalmologist who was eye chief at Valley Forge, Dr. James H. Greear:

> The enlisted men assigned to the program for the blind has the responsibility of literally teaching the blinded to take up their lives again. They oriented them in the location of beds, cubicles, and wards... They instructed them in practical methods of eating, dressing and care of their persons... They taught them to travel outside the hospital... They trained them in manual dexterity and aptitude.
>
> Good orientors were the backbone of the rehabilitation program for the blind; the success of the program depended on their proper selection. Although their tasks concerned simple and apparently obvious matters, these tasks were not simple for the newly blinded soldier. His progress has to be guided. He could not be made to do everything for himself at once; that would have caused a state of nervous tension superimposed upon the original ordeal. Yet he had to be made to increase his independence from day to day and from week to week.

And then we have the view of a blind patient, later trained as sociologist, Dr. Alan Gowman:

> The situation was so structured that the prevailing tone was set by orientation personnel, and it was this definition that gradually gained sway. In building a role for this segment of the blind population the aim of the orientation staff was apparently to move the blind individual into behavioral patterns having maximum congruence with those of sighted individuals. They not only attempted to push the intrinsic limitations of blindness to an irreducible minimum, but also rewarded those blinded persons whose general bearing was most akin to that of the non-injured. Much stress, for instance, was laid upon appropriate bodily movement such as turning the head and looking directly toward others while in conversation. In so doing, however, they inadvertently emphasize the discrepancy between the blinded individual's definition of his own role and the definition held in the large society.

There is quite a story to tell of the changes which have taken place in our ideas of the mobility instructor, what he should be, how he should be chosen and trained, though the types described by Hoover, Gowman and Greear may be recognized as his professional ancestors.

I attempted to describe the mobility instructor of this decade once after a convention where I had listened to a good deal of talk I thought was cynical. It is about people in whom I believe and their ways, the best I can do to describe them, and therefore is offered for the record without apology:

CREDO ASCRIBED TO CERTAIN MASTERS OF THE
ART OF TEACHING BLIND PEOPLE

I hold the art of teaching blind people how to perform without sight among the highest callings which a human being may answer with his life. If, at any time through my own infirmity, or to fill a power vaccum, the day comes when I must become a mere executive, supervisor, or adminstrator, I will remember that, no matter how it seems to the worldly, the true apex of work for the blind is personal service in direct contact with blind people, and that all organized work for the blind has no other end but this, as fully and well-performed as available knowledge permits.

During the years when it is my privilege to practice that art, I will do my uttermost, not only to extend my own effectiveness and the effectiveness of others, but also to devise ways of imparting efficiency with all that tact and kindness of which I am capable, bearing in mind that the most cherished attribute a person has is his self-esteem, based on a sense of worth, the quintessence of which is independence.

I will keep in mind that a severe handicap, particularly in its early stages, or if it goes for a long time untended, requiresthat an individual be a constant recipient of so much help that the burden recurrently seems intolerable, and that my actions and attitudes should never increase this burden by any kind of ostentation in my bearing toward my work or blind people. Without morbid self-effacement or subservience, I will avoid any form of encroachment upon the individuality of those I serve, especially subtly usurping of credit for their performance.

I will keep my emotions in such order that I will not seek exceptional satisfaction from relationships with those I help, and will steadily perform in such a way as to encourage them to rely on and be preoccupied with those persons it is most natural and desirable for them to know and to love.

To my working hours I will give the most complete attention of the most creative kind of which I am capable, dwelling constantly on every practicality which can render a human being without sight a person of value in his own eyes.

I will guard my tongue and my time, but give generously my knowledge and experience to others who are devoted to this art which is my calling.

I will reserve my scorn for those who aspire to be my colleagues without true respect for the calling, who are cynical toward all these things in which I believe, and without diligence and care in performing their duties. These I will relentlessly harry out of the field by open and above-board securities and sanctions without any regard for influence which such person may muster to counter-attack.

I will not spoil blind people, or encourage them to become mere charming enslavers of those around them. I will look to the long view in helping them, not to ease of the moment. But I will stop short of making myself a compulsive taskmaster over the people whom I serve.

No matter how my battles go, once a conflict is resolved, I will put it behind me and rest and recondition my heart, mind and body for further action in the long, creative endeavor which will govern all the days of my life.

Seriously though I meant, and mean, every word of this, that does not prevent me from asking myself if mobility of the blind is a fancy, a fact, or a fad. According to the psychologist, Dr. Adolph Meyer, fact is anything which makes a difference. According to me, a fancy is a bit of imagining, which may or may not turn out to be important, and according to the dictionary, a fad is a "custom, amusement, or the like, followed for a time with exaggerated zeal; a craze."

It was my extraordinary privilege to perceive the idea of the mobility instructor as it went through a metamorphosis from fancy to fact, i.e., from a bit of imagining to something that made a difference. And after quite a few years of development in rather exclusive cultures, I have seen it become fashionable, indeed, almost a fad.

This can be somewhat alarming. I have heard it said nothing gets outdated so fast as that which is the latest fashion. And the idea of the mobility instructor is one about which I care a great deal, and have spent a good deal of time undertaking to get others to care. Naturally this has caused me to think a lot about what made the image of the mobility instructor take hold.

Two thoughts are always uppermost as I reflect on this. One is the idea that the person in direct contact work with blind people should be regarded, and should regard himself, as a very special kind of instrument, should be handled, and should handle himself as such. I have often said I regard him as at the apex of work for the blind. When he is functioning in relation to the blind person, everyone else, no matter what his rank and salary, is a back-up person. It is a little like that front-line soldier the rest of us put there. The great country and army are the ones which not only recognize his worth, but give him what he needs to do his job.

But the other thought I have about all this is that the mobility instructor to be effective, and to be equal to the kind of responsibility he carries must have a special sense of proportion, be the kind of individual with whom all mean count, but none too much. This is the very essence of common sense. And common sense is what some of us have looked for above all else in mobility instructors.

Mobility and orientation of the blind is a relatively new specialty and as such, suffering some, though not all, of the growing pains new specialties must endure. I would therefore like to offer a few crumbs of comfort out of the past; words spoken first of Naval officers by John Paul Jones:

> I have sat on a Court Martial where the President of the court could not read the orders that appointed him, and a Captain of the Marines had to make his mark in signing a report. So long as you have such characters for officers the Navy will never rise above contempt... It is by no means enough that an officer be a capable mariner. He should be as well a gentleman of liberal education, refined manners, punctilious courtesy, and the nicest sense of personal honor. When a commander has by tact, patience, justice, and firmness, each exercised in its proper turn, produced such an impression upon those under his orders in a ship, he has only to await the appearance of his enemy's topsails on the horizon.

Another quotation, more modern, is by Dr. Alan Greff, writing in 1951 about the new specialty of corrective therapy in the Veterans Administration, following World War II:

> In some ways a new and growing profession can be said at a certain point to be in the adolescent stage of its growth. We all know adolescents. They are often a headache and just as often a heartening surprise. They show awkwardness and acute self-consciousness. They are unpredicatable. What they do not exaggerate they ignore, neglect or omit entirely from their reckoning. They scorn patience, compromise, trifles. They make passionate assertions and violent objections. But despite all these oddities of conduct they put themselves out, unfolding abilities and nascent power. And their minds and hearts are in the future. Their hope, their confidence in themselves steadily increases. When a profession is adolescent it is interesting, inviting, and alive, full of potentialities, of errors, hits and runs.

This was a description by an astute medical statesman of the group from which mobility instructors pealed off. A lot has happened, and the work done by mobility instructors has reached an excellence which looks more like maturity than adolescence. That is a happy thing to think about, except for one thing. Excellence is in trouble all over the world. It has quite a fight on its hands against some natural enemies; all the seven deadly sins, including envy, especially envy of any select group, even a group chosen for skill in service to people. This

envy is sometimes able to identify itself with the new world-wide push toward making everything available to everybody and with the less laudable urge to clear the world's decks of everything everyone cannot enjoy. Is this new? I think not. The essence of the problem goes far back.

It was John Locke who said, "Live the best life you can, but try to do it in such a way as not to give offense to others."

And Mill's prayer was: "Lord, enlighten thou our enemies...., sharpen their wits, give acuteness to their perceptions and consecutiveness to their reasoning powers. We are in danger from their folly, not their wisdom; their weakness is what fills us with apprehension, not their strengths."

BLIND REHABILITATION IN VIETNAM

By

Rod Kossick

About the author:

Upon completion of the Graduate Orientation and Mobility Program at Western Michigan University in 1962, Mr. Kossick returned to Grand Forks, North Dakota, and instituted a comprehensive rehabilitation program in conjunction with the University Medical Center Rehabilitation Unit at the University of North Dakota. In November, 1966, he joined the World Rehabilitation Fund for assignment as an Orientation and Mobility Specialist in Vietnam. While he served in that country, his wife, Sherry, and their four sons lived in beautiful Kuala Lumpur, Malaysia, where Kossick visited monthly.

The population of South Vietnam is generally estimated to be from fifteen to twenty million persons. Using the former estimate and conservative three blind persons per one thousand population, one might say South Vietnam has approximately forty-five thousand blind persons. General statistics show further that twenty percent, or nine thousand, are below the age of eighteen. Since life expectancy is much shorter than in the United States, and because the conditions causing blindness are not the same as in the United States, South Vietnam does not have a large elderly blind population. Therefore, rehabilitation services for blind persons could generally be designed for persons of employable age.

For the youth, there are presently three schools in Saigon enrolling about ninety students. In Danang, a small private school has just started with eleven students. Saigon also has one small sheltered workshop and one religious group of blind persons making straw products. These appear to be the only education and rehabilitation services for the blind in all of South Vietnam. Due to the defense effort, there are increasing numbers of blinded veterans. Along with this influx of blinded veterans came increased concern, since there were no rehabilitation services available for them until the start of this program.

In 1965, Miss Genevieve Caufield[1] urged the United States Agency for International Development to enter into a rehabilitation program for blind Vietnamese veterans. Dr. Howard Rusk[2] was also interested in establishing blind rehabilitation services in that country. Dr. Vi, Director of the National Rehabilitation Institute in Saigon, had been planning to develop similar services at that Institute. In 1966, Dr. Rusk querried several rehabilitation agencies in search of a person for this position. As a result, Russell Williams, Chief of Blind Rehabilitation, Veterans

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[1] A blind woman who has spent forty years in the Orient. Much of this time has been devoted to education and rehabilitation of the blind. Miss Caulfield has written her fascinating story in The Kingdom Within, published by Harper and Rowe.

[2] Howard A. Rush, M.D., is President of the World Rehabilitation Fund, Inc., New York City, which has been operating in contract with the Agency for International Development, U.S. Dept. of State. Their mission in South Vietnam has been to assist the National Rehabilitation Institute in the rehabilitation of amputees and paraplegics.

Administration, contacted the author regarding this in September, 1966. Following three months of Vietnamese language training in Washington, D. C., the author settled his family in Kuala Lumpur, Malaysia, and arrived in Saigon during March, 1967, for a two-year assignment.

The National Rehabilitation Institute functions in the Ministry of War Veterans with the main center in Saigon, a branch center in Cantho, one under construction in Danang, and a fourth in Qui Nhon. The mission of the Blind Rehabilitation Project is quite broad; to take the blinded veterans out of the convalescent hospital and place them into employment and society in general.

After evaluating the existing services for the blind, the National Rehabilitation Institute, and the Vietnamese society, it was planned that this could be done in three phases:

1. Adjustment training and Pre-vocational Evaluation
2. Vocational training
3. Selective placement

Phase one required a comprehensive residential center. This would have all the usual services such as orientation and mobility, braille, typing, hand writing, communication skills, activities of daily living, pre-vocational evaluation, counseling, homemaking, and social and recreational activities. The National Rehabilitation Institute, Saigon, was the best setting since they already had space, food services, medical services, rehabilitation therapists, and the administrative offices of the World Rehabilitation Fund. A building thirty feet by one hundred feet was chosen and renovated. The twenty-seven feet between that building and a twin building parallel to it were also utilized. This resulted in almost doubling the area, providing spacious rooms for braille, typing, office, dormitory, storage, pre-vocational counseling, and a lounge. A grass courtyard with a tree in the center was also constructed. The building and program were furnished and equipped from several sources; mainly USAID/ EDUCATION and the Military Civic Action Program. When the program was officially opened in August, 1967, it was completely stocked with Perkins braillers, typewriters, tape recorders, furniture and even personal items for the veterans, such as clothing. With the aid of other agencies, donations, surplus materials, and found items, the Blind Rehabilitation Section was remarkably spacious and well equipped. It is a facility that would compare favorably to many in the United States.

We began serving eleven blind persons with a professional Vietnamese staff of four full-time and two part-time orientation and mobility instructors, one typing instructor, and two pre-vocational evaluation instructors. All of the instructors function in other activities such as counseling or physical therapy as their time and abilities permit. All of the staff received training in orientation and mobility. The course lasted four months and included a two-week visit to blind rehabilitation centers and programs in Malaysia.

The instructor training program brought home to me that people are people, no matter where you find them. We shared a lot of laughs, as well as serious moments. The proficiency of trainees ranged from fair to excellent. It was beastly hot working under that Saigon sun, but my long-suffering paid dividends, just as I suspected it might.

When we began working with the blind patients, a deadlock developed concerning how many hours a day an orientation and mobility instructor should work. Some of the Vietnamese instructors felt that four hours a day in the hot sun was enough. My suggestion of six hours a day must have placed me in with "mad dogs and Englishmen". However, they did recall that the "white giant" spent more than four hours a day outdoors while training them. Another premonition that paid off was training the entire staff, even the braille teachers, as orientation and mobility instructors. This gave fruit countless times when there was a hot sun, an absent instructor, or scheduling difficulties.

In summary, the orientation and mobility skills constituting the Hoover or Long Cane Technique were validated in a foreign setting. After learning what the indigenous environment consisted of, one merely had to adapt previous learning to those particular travel conditions.

It was as easy (???) as a stroll downtown.

ORIENTATION AND MOBILITY SKILLS FOR CHILDREN

By

Robert L. Gockman

I am sure that most orientation and mobility instructors believe that all blind children who are not otherwise impaired can and should grow up to be capable and independent adults. I certainly do. But whatever we may hope and believe, a great many blind children will never become capable travelers. Why? 1. They may not be receiving any instruction. 2. They may not be receiving enough instruction.

With regard to the first point; there is little excuse for those in charge of an education facility to ignore a primary need of every blind child. The importance of independent mobility really strikes home when children become teenagers and begin to make plans for a college education or a future vocation. An inability to travel can make the difference between success and failure in attaining these goals. Orientation and mobility instructors can only attempt to convince administrators that the gaining of independent travel is the essential commodity we know it to be.

The second point of not receiving enough instruction is something that Orientation and Mobility instructors can do a great deal more to correct. Too many children receive insufficient instruction. The greatest service that can be done by instructors working with children is to insure that their clients receive an adequate education in the skills of travel. This cannot be done with an abbreviated course of instruction that covers only four to six weeks of time. At most, a "one shot" course of these dimensions can only begin to teach certain fundamentals. It cannot produce "finished" travelers. Most agencies providing this type of instruction readily admit this.

Let me suggest that all educational and training facilities that serve visually impaired children put into operation well planned units of instruction that are based upon a child's normal development pattern. Arbitrarily, I have listed four levels which can be called:

1. Early childhood or infancy level (1-5 years)
2. Primary or beginning school age level (6-9 years)
3. Intermediate level (10-13 years)
4. Advanced level (14-18 years)

The titles and age breakdowns are not particularly important. What is important is that certain skills are most apporopriately taught at particular age levels. Even though we are talking about skills of Orientation and Mobility as we think of them practiced by adults, some very important skills and theories for children should be taught and mastered far in advanced of any formal instruction with a long cane or a dog guide. The orientation and mobility specialist plays an important role at every level.

1. Infancy Period: With reference to the infancy period (1-5 years); it may be possible for a great many mobility specialists to see a blind child as an infant. He can be a valuable resource person for the child's parents. As a resource person, he can give both verbal and printed information. He can talk realistically with the parents about their expectations and goals for the child. He can assist them in their acceptance of the visual impairment.

While broadening the parents' understanding of blindness, the instructor can arrange and perhaps participate in meetings with other parents of blind children. Knowledgable professionals can be invited for further discussion and elaboration. He can keep in touch with parents on a regular basis, not to teach skills directly, but rather to reinforce the idea of a "normal" childhood as defined by experts. He can and should develop good rapport with the parents, giving hints as to how they may encourage exploration, independence, and a stimulating environment. He might also relate how blind children learn to do things at approximately the same rate as their sighted counterparts. At regular intervals the Orientation and Mobility specialist can check on the progress of the child well before he reaches school age. He might also consider encouraging the parents to enroll the child in a qualified nursery school as an excellent method of inducing school readiness.

Perhaps I have over-emphasized the services that are involved here, the extent to which any one O & M specialist can be of service. But if any instructor has ever said, "That boy's parents are certainly sad examples of what parents should be. They do everything wrong!", he has come to the realization that the time for doing anything about the problem may already be past. When comparing youngsters, an instructor may find one bright, inquisitive, and talented youngster like

Kathy. Another child may be like Danny; slow, dull, and a very poor traveler. Upon looking more closely into this situation, the instructor may find that Danny's parents cannot accept his blindness. They pity him and consider him incapable of any chores or responsibility. Trailing the walls has not been permitted because, "He gets the walls dirty", and as a consequence he needs orientation within his own home. Developing early skills can be the most important contribution that an O & M instructor can make.

2. Primary Level: As for the primary level (6-9 years), it should be possible at this stage to teach certain skills provided they are geared to the child's needs, understanding and maturity. Are there any rules to follow? If any, these represent major considerations: (1) Get all the help possible from parents and teachers. (2) Stress awareness of the environment (primary orientation skills and knowledges). (3) Use appropriate mobility techniques. (4) Use appropriate teaching methods.

With regard to point #1, parental and teacher help; enlist this cooperation NOW if it has not been accomplished before. Inform them of the common goals that should be achieved and how they may help to achieve them. If the instructor wants cooperation, he or she must be willing to cooperate also.

Considering point #2, "awareness"; a child can begin to learn simple references at this age such as simple directions of "right", "left", "in front of", "behind", etc. Cardinal directions of N.E., S.W., obvious landmarks, sensory clues and a host of other things may also be taught. He should begin to learn the "order of things", realizing that many things are systematic. Rooms, buildings, neighborhoods, cities, are all made with some logical plan. He should begin to be specific. For example, he should know that cars travel on streets and know on which side of the street he is walking and in which direction. Likewise, he should begin to generalize about his environment.

Point #3, "appropriate mobility skills", refers to pre-cane skills for indoor travel which will encourage safe and efficient mobility. Outdoor travel, with the instructor as a sighted guide can be extremely useful in finding out how much the student really understands of the outdoors and to expose them to experience with common travel situations. Simple explanations can be used to explain sidewalks, parkways, gutters, curbs, street sounds, gradations, driveways, alleys, etc.

With reference to point #4, "appropriate methods"; it is common knowledge that young children have a short attention span. Periods of fifteen to twenty minutes are advised. Include activities that are fun to do and can be valuable teaching methods. Some games that could be included are: "Simon Says" (useful for teacher terminology, body parts, directions), "Pirate Treasure", "Hide and Seek", and "Find the Hidden Toy" (these latter three are all useful for presenting verbal directions, sensory clues, etc.). "Let's explore" and "Tell me what you find" are useful activities for learning more about unfamiliar rooms and places. My own experience with youngsters within this age bracket utilizing only one short period per week for each child, has been very rewarding. Group activities are useful for the game situations. Tactual maps representing a simple block structure have also been used with success.

3. Intermediate Level: With the intermediate level (10-13) the instructor can begin indoor and outdoor training using well defined units of instruction in the use of the long cane. The instructor should, (1) stress high standards of performance, (2) stress awareness of the environment through more advanced orientation skills and (3) use practical and motivational objectives whenever possible.

It would be reasonable to assume that limited residential travel would be the average instructional goal in the unit. This goal can be equated to the average travel needs of many 10-year-olds, and certainly, all 13-year-old students. Units should be planned to include a complete familiarization of the school with cane skills, the outdoor area surrounding the school grounds, a typical residential area, and a working familiarity with his own neighborhood. (This is assuming that the child's neighborhood is residential in nature. If not, good judgment must prevail on the part of the instructor as to how far he might advance his student to facilitate useful travel at this level.)

The instructor can determine his student's knowledge and expertise by initially allowing the student to assist in his own lesson plans and then presenting the lessons utilizing only the two known factors of the starting point and the destination. The instructor should describe situations and things as essential parts of the lessons. He should use familiarization techniques for new and strange places. Street names, cardinal directions, directional designation of corners, street address systems, and braille street guides should also be incorporated. If there is a need for materials within this unit or any other developmental unit, the instructor should take the time to make them.

While the instructor's lessons may be limited to scope and distance at first, he should use imaginative objectives that can stimulate good travel. In a training situation, anything that denotes fun, practicality, or interest such as a candy store, bakery, pet shop, or hobby shop can serve as useful motivating objectives. At home and in the neighborhood, practical destinations can be used in the interest of making a contribution to the family welfare and personal satisfaction. Trips to the nearest mailbox, grocery store, social center and other such places are very appropriate. The instructor should utilize the parents and the child in planning the list of objectives that are meaningful and practical.

Emphasis should always be placed on the development of skills. The instructor should never sacrifice safe and efficient travel for distance. The student should only be advanced when skills are properly used and when confidence and trust is established between instructor and student. Orientation techniques and knowledges should be incorporated into every lesson and advanced just as mobility skills.

4. Advanced Level: This last level, (14-18 years) should correspond to the type of travel that is normally thought of as "adult travel". It should include business travel with related indoor-outdoor familiarization and experience. Use of public transportation should also be included. This unit could begin with children of a younger age (11 or 12) and it can be carried over for a longer period of time than the previous unit. It does not need to be taught as a single, unbroken unit, but could be spaced over a few years with certain goals being worked on at specific intervals to meet variations in needs and abilities.

In summary: Orientation and Mobility Instructors have the responsibility to produce quality instruction. Quality can best be obtained by realizing that the gaining of independent mobility is an educational process, covering an extended period of time from infancy through the teens. The Orientation and Mobility Specialist should make himself at every level of instruction, because there is a need for the development of certain skills at all levels. Consider the COMSTAC report on standards and time allotments for independent travel training. The recommendations set forth by facilities serving the blind are as follows for recently and totally blind adults with no previous experience:

1. Travel within a controlled, familiar indoor environment - (60 to 80 hours)

2. Unrestricted travel in a familiar environment (neighborhood) - (80 to 100 hours)

3. Unrestricted travel - (120 to 200 hours).

If the time allotment is this extensive for an adult with excellent visual reference, how much time must be devoted to a developing child without visual reference? Every instructor should check the amount of time he spends with his young clients. The frequency and duration should at least equal that published by the COMSTAC Report. There are excellent reasons for extending these recommendations much further for children.

Finally, mobility is a primary need. It cannot and should not be relegated to a position of minor importance. Only when a thorough program of Orientation and Mobility is established at every educational facility involved with blind children will we begin to see the majority of our blind children become capable, mobile, employable adults.

THE PARTIALLY SIGHTED CLIENT

By

Hugo R. Vigoroso

I would like to share with you a number of thoughts concerning the partially sighted client with whom a Peripatologist might work. I am certain that many of the readers agree that visual functioning is a highly complex process; therefore, it will be obvious, perhaps, that what follows is not intended to be a complete treatment of the area but, hopefully, it will offer some of the significant factors and areas to be considered by a Peripatologist.

The following factors are offered as a means of establishing a frame of reference for the "Outline" that follows:

1. Residual vision has quantitative and qualitative variables that are unique to the individual; in terms of the quantitative-near, distant and peripheral acuity, etc; in terms of the qualitative-ocular area of defect/loss, efficiency of use, etc.
2. A person with low vision lacks or experiences a relatively low level of visual stimulation; therefore, he may have to be taught visual forms and/or be won over to the world of seeing.[1]
3. Visual efficiency is thought to be a matter of learning which involves:[1]
   a. attention-to bring the stimuli within visual range
   b. awareness/recognition-involves cortical and emotional factors
   c. response-indication that learning is occurring
   d. repetition-means by which learning patterns are established
4. Visual recognition and discrimination are thought to develop through a progressive merging of three stages:
   a. knowledge that something exists in the visual field-it may be that no contour or discrete parts stand out
   b. emergence of a visual pattern-certain parts of the object/pattern can be interpreted and identified in terms of some general category
   c. the organization of separate details into known characteristics of a specific object/pattern

Note: Consideration is to be given to the affect of context and peripheral clues to recognition.

5. It is suggested that without relevant prior experience in regards to the stimulus, the need for a strong, clear, complete visual image is greater.

Now let us consider several of the factors included in the "Outline". When beginning to and in the process of work with the partially sighted person it is suggested that those items listed under Section A "Consideration Concerning Lessons", are essential to the observation of the client and in selecting/planning of experiences.

Section B "Factors Concerning Illumination", attempts to develop one of the variables of visual functioning (Section A, 3, b). Perhaps one of the greatest difficulties in this area is the frequent lighting changes in the out of doors environment (partly cloudy, weather changes within a day, and from day to day, etc.) and the influence of such on the repeated experiences necessary for learning. This is one reason why one might consider doing the ground work for learning how to look and see in an indoor environment where one might have some control of the variables being considered. The materials and methodology suggested by Barraga[1], Valett[13], and in the Frostig[3] and Teaching Resources[12] programs can be modified and implemented for such efforts.

Section D "Considerations Concerning Lessons", attempts to suggest particular factors to observe and inquire about (Section D, 1, 2) relating to the mode and level of functioning of the client when you first begin to work with him. What does he see? Where is it?[15] How does he go about searching for it? What properties does he attend to and utilize for identification purposes? This step is followed by planning the visual experiences of the blind person (Section D, 3, 4). It is not intended that all the variables be "arranged" or "staged" but it is suggested that it is necessary to consider them as an observational-inquiry frame of reference in order that one might attempt to determine if there are consistancies in what a person can see under what conditions; one might utilize such an observational framework concurrently with a "regular" mobility lesson either indoors or outdoors. If said consistancies do evolve, then the Peripatologist is better prepared to begin to answer with the client how much he can rely on his sight alone and/or in conjunction with other sensory data for navigational purposes.

In accumulating the response data it might help to have an instrument that might enhance this effort; accordingly, a segment of a sample chart (Section C) is offered for your consideration.

If one is working with a person who is congenitally partially sighted, an essential consideration would be those factors relevant to the process of concept formation (see "Concept Development-Thinking Out Loud"; The Long Cane Newsletter, June, 1969). This person may not be "seeing" because of conceptual deficiencies rather than or in addition to perceptual difficulties.

In conclusion, I would like to make clear that the above thoughts are intended to be suggested guidelines for working with a partially sighted individual. In addition it is suggested that the direction and guidance of an opthalmologist or a person trained and qualified in the area of low vision/low vision aids is considered an intergral and perhaps primary part of this effort.

PARTIALLY SIGHTED CLIENT
Outline

A. General Factors
   1. Data:
      a. age; physical/sensory/mental/emotional/emotional information; educational and experiential history
      b. eye report concerning acuity, date of onset, etc.
      c. prognosis of vision status-progressive? stable?
   2. Investigate the actual and/or possible use of low vision aids; tinted lenses; occlusion.
   3. Consider the following variables of visual functioning:
      a. location (ocular) of reception
      b. level of illumination (see "B" below)
      c. size of object
      d. distance-forward, peripheral
      e. depth perception
      f. intensity of stimulus-color, contrast (seasons)
      g. time-how long is stimulus available? how long does student require to find, focus, identify?
      h. time of day in terms of efficiency of function: e.g. fatigue, medication
      i. stationary/moving-client and/or object
   4. Use of vision in familiar and unfamiliar areas
   5. Intermode (sensory) integration
   6. Implementation of cane: would technique modification be appropriate? use in busy area, crossings, transportation; etc.

   *Note: for items "1" and "2" above, the following listings under "References" might be found to be informative: "A,6,a", "A,7,c,d", "A,11," "B,1".

B. Factors Concerning Illumination
   1. levels of illumination
      a. outdoors
         1. day (bright sun; hazy sun; cloudy-bright; cloudy-dull)
         2. dusk
         3. night
      b. indoors
         1. natural light
         2. overhead lighting
         3. side lighting
   2. In terms of light reflection from objects viewed they might be catagorized as:
      a. brilliant subjects: e.g. beach, snow
      b. bright subjects: e.g. near by people/objects at beach, in snow
      c. average subjects: e.g. near by people, houses etc. Not in shade
      d. shaded subjects: e.g. people/objects in open shade (shadow of house across sidewalk)
   3. illumination level constant/changing, consistent/inconsistent

C. Sample chart for gathering performance data
   Condition and context of experience: Illumination-Bright sun (without visual aid; familiar area)

D. Considerations Concerning Lessons
   1. Visual "tour"-what does the person see utilizing his methods and terminology?
      a. what properities of the object/environs does he attend to? Does he know what to attend to? What does he select?
      b. what is student's mode of visual focusing? scanning (eyes and/or head?)
   2. Environmental properties relevant to navigating: shape, size, color; stationary/moving; factors of spatial organization-position, location, direction, distance, relationships

   Note: 1. this area is critical to the entire process
         2. relate the above to environmental needs; e.g. traffic lights, color, size, distance, background distractions; crosswalks; street and bus signs; room and building numbers; etc.

SAMPLE CHART

Orientation of object front/back/side	Illumination source to client front/back/side	Objects	Distance F.P.	Distance F.J.	Size	Stationary	Moving S/M/F	Color/contrast	Head Scan	Comments
N/A		curb ( )	E.	C.				curb cement	No	What is
		walk-driveway	20'	10'	4"x4"		Cl.	street-hot top		affect of
		crosswalk								parking?
		pole (telephone-street light)								
		street signs								
		traffic lights								
		car								
		baby carriage								
		person								
		bicycle								

Note: code--F.P.= first perception
F.J.= final judgment
E=error
C=correct
Cl=client
ob=object

3. Search Pattern: consider suggesting systematic scanning procedure; e.g. scan with head and/or eyes in an overlapping pattern horizontal or vertical or both
4. One approach to formulating a lesson in visual experience; determine one object that student knows and can see then attend to variables of
   a. illumination-same, changing
   b. illumination plus distance-front, sides, up/down
   c. illumination plus movement-toward, away, side to side, up/down
   d. add size, color, background distraction (visual and auditory) limited time to "a", "b", "c".

Note: the following listings under "References" might be found to be relevant to this area: "A, 1, 3, 5, 12, 13, 14".

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CANE TRAVEL IN WINTER

By

S.W. Rudkin

Being a peripatologist in Canada offers certain unique experiences probably not enjoyed by many other instructors in the field. The most obvious, unfortunately, is exclusiveness. At this time there are no other instructors in Canada who have received graduate training in the specialty of Orientation and Mobility. Some schools and agencies still employ blind staff of other disciplines as part time Mobility teachers.

Perhaps the most questionable benefit of working in Canada, however, is the opportunity to spend a greater percentage of my teaching in winter conditions than most of my colleagues in the United States. If nothing else, it has presented me with the challenge of observing varying winter conditions and formulated generalizations that may be of use for Orientation purposes. Since Montreal does not have a complete monopoly on winter conditions, I concluded that others may find my observations on Snow Travel familiar and, perhaps, beneficial.

Almost without exception, trainees who commence Orientation and Mobility instruction in the summer months express concern over the anticipation of traveling in the winter. Many ask: "what are we supposed to do in the winter?" or state: "I suppose it is impossible to travel independently once the snow arrives." To questions such as these I reply that, indeed, traveling in the winter is more difficult than summer mobility, but is by no means impossible: in fact, a good traveler in the summer is inevitably a good winter traveler. In addition, I mention that most winter conditions are not difficult to master and are in some respects advantageous to the cane traveler. For example, a bank of snow at the side of the road prevents many trainees from slipping off the curb or wandering inadvertently into the street. Many small cracks or ridges get filled with snow and prevent the cane from sticking as would be the case in clear conditions. Sidewalks that are strewn with permanent obstacles such as poles, fire hydrants, signs, etc., are much safer in the winter because seldom is the snow cleared away from them too closely. As a result, many dangerous obstacles are encircled by a convenient bumper of snow throughout much of the winter.

It is quite true that some winter days are particularly disagreeable and one would not venture out of doors except of necessity. On such occasions an offer of a lift or a taxi would seem the best alternative; unfortunately, on unpleasant days, everyone has the same idea and taxis are scarce.

What makes mobility for blind persons more difficult in the winter than in the summer? Well, obviously, the lower temperature is less pleasant to most people; this often necessitates the donning of ear muffs or a hat that hinders hearing to some degree, and the wearing of gloves that decreases the sensitivity of the cane. It is also readily apparent that walking on snow sidewalks is more taxing to one's ability than navigating in clear conditions.

These factors, however, can be overcome with perseverance and practice and are not in themselves responsible for making winter travel difficult. It is the continually varying sidewalk conditions that poses the greatest problem for blind cane travelers. If, after adjusting to several days of hard-packed snow-covered terrain, the temperature rises and the snow melts, the blind person is immediately faced with an entirely different set of circumstances. If the temperature drops after a melting period, the conditions and accompanying problems vary again--so it goes throughout the winter. It generally requires an experienced traveler who can adapt his techniques successfully to overcome the navigation problems of winter.

A successful winter cane traveler almost certainly has learned to direct most of his concentration on what I describe as "basic direction" rather than physical landmarks. In sub-freezing weather, even without snow, grass becomes rock-hard. This makes the normal touch recognitionor distinction of grass, pavement and gravel extremely questionable. With the addition of snow, the location of other landmarks such as curbs, ridge lines, driveways, etc., becomes equally suspect and unreliable. Traffic becomes an overwhelming asset and guide. I emphasize over and over again that Basic Direction is the key and that one should keep moving as steadily as possible, retaining his basic direction. If one was to stop, examine and attempt to evaluate every peculiar mound of snow or unusual situation, one would quickly get discouraged. Just as cars find it advantageous in snow to keep moving and try to avoid stopping, so it is for the cane traveler.

There are a few modications in techniques that help a great deal, but several are recommended. Generally, a one-piece long cane is better suited to winter travel than a collapsible cane. A heavier caneis usually better than a light cane. A heavier touch, with a slightly narrower arc, is superior with new snow or light falling snow; once the snow becomes hard-packed, a lighter normal touch, with total concentration on traffic alignment and basic direction, is helpful. The "sweep" motion of the cane is the most useful in most types of snow conditions. A sweep of the cane on the sidewalk will at once inform a traveler as to the conditions he is likely to encounter on the following block. A "sweep" is superior to a "touch" in that it covers a greater area and acknowledges the texture of the terrain more easily. The "tough and drag" method of trailing usually is successfully used in the winter when the standard method fails.

A blind person who is about to embark on a solo excursion in the winter should begin by compiling as much information about the travel conditions as possible. It is a valuable asset to have a sighted person available who can look out the window and describe the conditions and answer basic questions. How clear are the road and the sidewalk? Is there bare pavement, and where? Where are the banks of snow? How deep is the snow on the lawns? What texture is the snow on the lawns compared to the snow at the side of the road? Do the curbs at the corners liik distinguishable? Are usual landmarks, such as poles, fire hydrants, bus stops, stop signs, etc., approachable or are they buffered with a circle of snow? Are there any portable snow clearance signs visible that may be encountered? Do the driveways appear to be distinguishable under foot?

No travel area is identical, but a trainee can quickly learn the basic questions he should ask to gain as much useful information as possible about his district.

If it is not possible to get a sighted person's information as to the travel conditions, a blind person must discover it himself. Upon reaching the sidewalk, a short exploration is beneficial. Sweep the cane across the sidewalk to determine width of travel space, firmness of terrain and perceptibility of the curb. If there is a bank of snow covering the curb, determine its consistency and height. The consistency of the bank is important because it is always different from the snow covering the lawns. Sweep the cane lightly against the inside guideline, and then, on top of the grass to determine the consistency of the inside snow. While navigating the first walk, pay particular attention to recognition of drivewaysand other landmarks which you are familiar with. Likewise, the first street crossing can be used to get a reasonably good idea as to how clear the streets are, the corners, etc. Once you have the general characteristics in mind, concentrate predominately on retaining your basic direction.

When discussing orientation clues in the winter, it is advantageous to know the general steps of snow clearance that your district provides and the stage that they have attained during your traveling. For example: a typical residential or small business area usually begins by:

1. Clearing the main streets, leaving snowbanks at the side covering the curb.

2. Minor streets and sidewalks are ploughed, leaving more banks.

3. Sidewalks of major streets are cleared.

4. Salt spread on major streets, melting the snow.

5. Sidewalks of minor streets are cleared and sand is spread if the conditions are icy.

6. Snowbanks are cleared away from the curb slightly into the street, giving the illusion, if the curb is not perceptible, of having an extraordinarily wide sidewalk.

7. Snow blowers remove the remaining snow by blowing it onto the lawn or into trucks.

8. Men with shovels clear remaining snow away from around fire hydrants, newspaper boxes, parking meters and similar landmarks.

By this stage, the main roads are usually clear and bare, although often wet; minor streets often have a hard-packed snow cover and sidewalks are similar. Curbs have become readily discernible. Traveling now is relatively easy until the next snowfall, thaw or cold spell.

If temperatures rise above freezing, certain clues are discernible. Water flowing into sewers sometimes points the way to the street. Slush becomes predominant in driveways. Water dripping from the buildings and trees can often help in reorientation or maintaining your basic direction. Water in the gutter often is the clue that one is straying into the street.

If the temperature drops quickly below freezing, perhaps the most confusing of all conditions results. The frozen ice and snow creates numerous illusions of curbs, corners and driveways. Often, only a narrow footpath has been beaten by pedestrians; however, the road is often quite clear and smooth. The snow on the inside is much smoother than the snowbank at the side of the road. Driveways are often quite rough, with frozen ruts and car tracks running perpendicular to the sidewalk. This is where a car has backed over the driveway either during a storm or before the walk was adequately cleared, leaving the tire depressions which subsequently froze.

A cane traveler is more likely to encounter parked cars in the winter because of straying inadvertently into the street or a driveway; this can be an excellent confirmation as to where one is, depending on the direction the car is facing and the point that you hit it. Striking the side of the car directly in front of you may indicate that you have strayed into a driveway, or the car is parked in the driveway but partially over the sidewalk, or that you have made a wide street crossing to the inside. Other occasions, of course, can be found when you may hit a parked car, but it is helpful if you can acquire as much orientation value as possible from the encounter.

Any sudden change from previously consistent terrain should be reviewed with suspicion or acknowledgment. A change from a snow-packed sidewalk to a bare patch of pavement, for example, usually indicates being in the street.

The orientation clues that exist in winter are many and varied. Each district or town is likely to have both similar and unique circumstances from those described here. Whatever they may be, the efficient application of retaining one's basic direction and stopping only when physically necessary is the key to winter travel success. Proficiency in retaining one's basic direction can be practiced satisfactorily indoors in a large open space such as a gym, hall or auditorium. By squaring off on one wall at Point A, a trainee can be placed directly opposite an objective on the far wall--Point B. Point B must continually be kept in the mind's eye. At first, straight line travel is practiced until veering is eliminated. Then obstacles, such as benches, chairs, etc., are systematically placed in the path which will be encountered in the crossing from A to B. This should be started simply with one bench that will be contacted at right angles. Once this obstacle has been mastered, the angle of contact should be altered from 90 degrees to 45 degrees. This will prove considerably more difficult to circumvent the bench and retain one's basic direction well enough to come close to Point B. When this is mastered, different angles and more obstacles can be added.

If a trainee has unusual difficulty retaining his basic direction, a sound beacon should be placed at Point B to continually mark the location. This would be withdrawn as improvement is noted.

Can a blind person travel adequately in the winter? I guess the answer to that question can best be answered by the comment of a middle-aged woman two years ago. She had reluctantly started her Mobility Program in the late fall and was convinced that navigation in the snow would be impossible. As the instruction drew to a close in the early spring she was again concerned. "But how am I going to travel when the snow is gone?" she said with a slight smile, as she recalled her previous anxiety.

WHAT'S NEW AT G.B.U.

By

Donald W. Rapp

In 1952, the Greene Blind Unit was opened at the country's oldest state institution for the mentally retarded, the Walter E. Frenald State School, Waltham, Massachusetts. This facility was established to meet the needs of Massachusetts residents of all ages who were both blind and mentally retarded. Included among those served have been many of school age who could not be enrolled in other schools.

Since its conception the program afforded those at the Greene Blind Unit have varied. The extent and quality of these programs have reflected the types of personnel and finances available. Currently the Greene Blind Unit has a program that among other things stresses orientation and mobility. This emphasis has resulted from a careful analysis of the needs of the residents and day students as revealed in a three year project conducted at the G.B.U. by Boston College.

Mr. Paul McDade, the present director of the G.B.U., served as the principal investigator of this three year project which was sponsored by the Vocational Rehabilitation Administration. The major focus of the project was to demonstrate how to teach orientation and mobility to blind mentally retardates. By working closely with the residents and staff members of the G.B.U., Mr. McDade was able to appreciate many of the unmet needs of mentally retarded blind persons. As a result when he was appointed Director of the G.B.U. he helped to inaugurate some changes in the current program offered residents and day students to acquire the basic skills, which they need in order to achieve their potential in independent living. To accomplish these goals, Mr. Rapp, an experienced teacher of the blind mentally retarded, and five peripatologists, including Mr. McDade were employed. This team has been assisted by student teachers from Boston College, Boston University and Lesley College. Also of considerable assistance have been volunteers who have aided by providing individual tutoring in such areas as braille, self-help skills, recreation and life enrichment for children lacking stimulation.

The program has provided training in areas necessary to insure the possibility of successful future job placement. While the amount of training in specific areas is flexible, each trainee is exposed to a number of areas pertaining to his present need. These basic training areas are: techniques of daily living, household management, communication skills, orientation and mobility, task management (pre-vocational training) leisure time activities. concept development, and vocational placement. Supplementary programs include music, physical education, woodshop, and a community program conducted by the Massachusetts Association for the Blind.

The concept development program is conducted by one of our staff members and assisted by Boston College Peripatology students under the supervision of William Walkowiak.

TECHNIQUES OF DAILY LIVING

The objectives of the TDL area are to teach the trainee how to be clean and well-groomed; to acquire good manners so that he can live with others and practice effective habits in their presence; to build up a self-image and self-identity; and to provide learning experiences for the betterment of his own being.

HOUSEHOLD MANAGEMENT

This area includes functional application of culinary arts; understanding of basic tools used in minor home repairs; basic chores such as dusting, vacuming, laundering, ironing, and sewing.

COMMUNICATION SKILLS

Communication is an essential skill which enable individuals to acquire basic knowledge about the physical and social environment. It includes not only the ability to understand language via the auditory sense but also the spoken and written modes, which are stressed in this training area. A variety of mechanical devices are employed to provide listening opportunity. These

opportunities help the individual become aware of the physical, political, social and economic world.

ORIENTATION AND MOBILITY

The objective of orientation and mobility is to develop those skills that will enable an individual to be a safe, efficient, independent traveler during training and in future vocational placement. Indoor and outdoor techniques are emphasized, including: independent travel to and from classrooms or training area; negotiating special areas such as the employees' cafeteria, recreational areas, public restrooms, as well as any other situation a student is bound to encounter during training.

TASK MANAGEMENT

The main purpose of this phase of the program is to provide the trainees with a series of structured, stimulating experiences in a controlled setting. The primary goal is to foster acceptable social and personal attitudes by means of related activities which are essential to successful habilitative adjustment. Various materials and equipment are utilized to provide instruction in terminology, tactile discrimination, following directions, spatial concepts, accuracy, speed and the necessity for safety precautions.

Healthy work attitudes of major concern are: (1) co-operation with authority; (2) co-operation with fellow trainees; (3) concentration, perseverance and pride in work completion; (4) control of unacceptable mannerisms and (5) safety in handling materials.

LEISURE TIME ACTIVITIES

The ultimate goal is to develop and foster those activities that will enable an individual to make better use of his leisure time during training and in the future. Included in the activities are games, hobbies, and field trips as well as exploration of personal interests expressed by the trainees. Arts and crafts is one medium of exploration. This is one area where student teachers and volunteers can assist individuals who need specific help.

CONCEPT DEVELOPMENT

Concept development involves development of those basic concepts essential to independent mobility and a knowledge of one's environment. A knowledge of body concepts as described by Bryant Cratty is essential for the beginning phase of this program. Terminology must be consistant and meaningful for conceptualization in a variety of experiences. These experiences can involve aids such as maps, scale models, actual objects, etc. Concept development is not an entity unto itself, but is significantly enhanced through the experience and terminology of the entire program.

VOCATIONAL PLACEMENT

Before trainees are placed on jobs, evaluations are made to select candidates best qualified for this particular phase of training. When placement is made, a member of the staff remains with the trainee until he is able to function effectively without supervision. At the present time, trainees are functioning adequately as dishwashers, proters, laundry assistants and supply clerks. Opportunities for employment are only limited by the capabilities of the trainees.

There are jobs available in the community which must be investigated as possible sources of employment for our trainees. We feel optimistic about future community placement, since our training program is realistic and is meeting the needs of the individuals we now serve

CONCLUSION

At the present time the educational team is training 63 residents and day students in all phases of the program. However, through supportive services, approximately 60% of the G.B.U. population (239) is being served in some capacity.

Another new program now in its initial phase is the Program for deaf-blind rubella children. At present, there are six children in the program. Emphasis is on modification of behavior and self-help skills. The Perkins Deaf-Blind staff is offering consultation services.

Progress brings change in programs for the retarded-blind at G.B.U.

CONCERNING CERTIFICATION OF ORIENTATION AND MOBILITY SPECIALISTS: A REPLY*

By

David L. McGowan

*Reprint from "The New Outlook for the Blind", March 1970

I have just had the opportunity to review the article "Concerning Certification of Orientation and Mobility Specialists" by James A. Kimbrough, of the Greater Pittsburgh Guild for the Blind. First of all, I would like to say that I had the pleasure of meeting and chatting with Jim Kimbrough and I have found him to be a very fine person and a dedicated professional. I am sure we can all agree that the article is a very well-thought out and smoothly written position paper. However, this does not excuse the contradictions and untenable conclusions that were presented.

As one reads the aforementioned article, three basic hypotheses are mentioned and form the basic tenets of this position paper. These are:

1. That the Greater Pittsburgh Guild for the Blind's in-service training program is comparable to the discontinued pre-professional in-service training program at the Hines Veterans Administration Hospital.
2. That the graudate level preparation leading to a master's degree related to the field of orientation and mobility is an unrealistic standard.
3. That the three training programs((a) Professional Program leading to a Master's Degree with a specialization in Orientation and Mobility (b) Undergraduate degree with an interest in Orientation and Mobility (c) an in-service training program conducted by an independent agency) are comparable and produce equally qualified personnel. It is these three hypotheses which form the basis of Mr. Kimbrough's position paper that I find untenable.

Mr. Kimbrough relates a basic belief that early workers in the field of orientation and mobility for the blind came from various backgrounds, different educational levels, and had a multitude of varied experiences. He also assumes that these people had an ability to relate to people on a interpersonal basis and he stresses this point when he mentioned the early trainers concerned with both the dog and cane. I am sure that these basic assumptions would still be valid today in any interpersonal field both on a sub-professional and a professional level.

Let us now examine Mr. Kimbrough's first and second hypotheses, these being 1) the quasi-comparability of the Greater Pittsburgh Guild for the Blind's in-service training program with the Hines Veterans Administration Hospital's in-service training program and 2) the Graduate Degree as related to the field of orientation and mobility. Throughout his paper, Mr. Kimbrough attempts to identify the orientation and mobility in-service training program at Pittsburgh with the pre-professional in-service training program concerned with orientation and mobility at Hines. He does this by comparing the difference in background, experience and education of people initially working in the newly-formed pre-professional in-service orientation and mobility in-training program at Hines. He alludes to the practicality and efficiency of in-service mobility training program by saying that the Hines program and the Pittsburgh program have the largest mobility staffs in the country. However, he fails to relate that the great majority of the Pittsburgh staff, although given the title and assignment of working on an orientation and mobility staff are not capable of being certified even under minimal contemporary standards as are the Hines people. He also fails to relate that the Catholic Guild for all the Blind in Newton, Massachusetts, also has a large orientation and mobility staff. This staff has fourteen people with graduate degrees in orientation and mobility who are obviously certifiable.

Mr. Kimbrough consistently attempfs to identify his program with the Hines program as related above. It is quite obvious that even though one in-service training program might have produced satisfactory personnel, it does not mean that a casual relationship takes place and that all other programs do, or in fact, are even capable of producing competent personnel. Even if this casual relationship was true, and it is quite doubtful that this is, this would only bring the Pittsburgh staff on a parity with the antiquaristic Hines sub-professional standards. In order to examine this point in greater detail, we must first examine a brief history of the development in the field of orientation and mobility and its relationship to the cane.

In 1943, the training centers concerned with rehabilitating the blind were Valley Forge General Hospital and Letterman General Hospital. It was here at Valley Forge that some of the first in-service work in training people to work with the blinded veterans was initiated. The personnel involved in orientation and mobility were given a two-week program to acquaint them with basic knowledge and to give them experience in the work that they would be performing. In 1944, a bulk of this work was transferred to the Avon Old Farms Convalescent Hospital. In 1948, Hines initiated its work regarding rehabilitating the blinded veteran, and it was here in 1948 that workers were recruited from various fields and given in-service training on a highly organized basis to enable them to work with the blind more effectively. The personnel involved in the Hines program were given more thorough basic training and experience than were their predecessors. Sometimes these training programs lasted five or six months. In 1953, the first mobility conference was held in Gloucester, Massachusetts, with the purpose of establishing standards for instruction in the field of orientation and mobility.

In 1958, the Office of Vocational Rehabilitation placed the training of orientation and mobility personnel on its priority list of training needs in the field of rehabilitation of the blind. In 1959, the National Conference on Orientation and Mobility sponsored by the Office of Vocational Rehabilitation was held at the American Foundation for the Blind in New York. Here well-known and knowledgeable people in the field of work with the blind, experienced in the formative stages of orientation and mobility training and acquainted with the multitude of problems of administration, agreed on the basic principles concerning the training of orientation and mobility people. These principles were that a training program should be on the graduate level and that the orientation and mobility personnel should be sighted. One must keep in mind that these people were fully cognizant of the relatively high competence level of the Hines personnel who were trained by the in-service method, but these people felt that in order to train high-level professionals and to upgrade the standards for training orientation and mobility personnel, it was absolutely essential that graduate degree professionals be trained if the blind were to receive high-quality instruction.

Throughout the article, Mr. Kimbrough relates that he feels that the graduate degree in orientation and mobility is an unrealistic standard, e.g. too high a standard, but one must go back to the 1959 conference when leaders in the field of blindness felt that professionalism, e.g. Master's Degree, was a sufficient and necessary requirement in order to upgrade the field of orientation and mobility instruction to a needed professional level.

The various components of the Pittsburgh in-service training program were related at great length and it was claimed that its standards could approximate the original Hines preprofessional in-service training program which was instituted over twenty years ago. Because of the nature of the elaboration of the Pittsburgh training "curriculum," one might think that this could possibly evidence the "college catalog syndrome."

The third hypothesis that Mr. Kimbrough presents is that the three preparation areas are equivalent and produce similarly qualified personnel, and that these personnel, even though they have different preparations, are equal. It is this hypothesis that Mr. Kimbrough himself proves untenable, and one need only to reread his position paper in order to see this. Mr. Kimbrough purports to evaluate graduate programs, undergraduate programs and his own agency's in-service training program and comes to the conclusion that "...the curricula and quality of learning experiences at all three facilities are nearly identical..." It seems apparent that his purported cursory evaluation is subjective at best and since he is intimately involved in one of these programs, the question of not only subjectiveness but of bias is raised. In addition, Mr. Kimbrough relates that "...it has been observed that the mobility specialists from the three types of training facilities have been equally qualified and knowledgeable about the performance of their jobs." Again, as in the issue of curricula and learning experiences, his conclusions regarding the performance of the people from the three different training programs was also subjective and biased.

Throughout the paper, Mr. Kimbrough attempted to equate the various training programs. However, he ludicrously and tacitly admits and thus disproves his own hypothesis, e.g. that the "...mobility specialists from the three training facilities (are) equally qualified and knowledgeable about the performance of their jobs," by suggesting that graduate mobility specialists be employed as training coordinators and reiterates the superiority of the graduate level person by saying that the graduate person with a Master's Degree would be "...fully qualified to serve as director of supervisor of a mobility staff. They could also act as consultants to various agencies and their staffs or become part of university faculties." He also calls for a "...move to make a clearer distinction between graduate, undergraduate and agency programs." Once again, Mr. Kimbrough admits the differences among the three training programs and the superiority of the graduate level professional and by doing this, tacitly admits the inferiority of the

undergraduate person and the person who is "trained" in an in-service training program. One simply can not understand how he can ask for delimiting the three training programs and still maintain that they are equal and produce equally qualified personnel.

Mr. Kimbrough again relates that requiring standards for certification involving only a graduate level degree is setting an unrealistic standard. Again, the issue of the 1959 conference is raised. This conference showed foresight by establishing two criteria around which mobility training programs could center, these criteria being, the graduate degree and sight of the instructors. These criteria were quite revolutionary, forward-looking and precipitated the beginning of the profession of orientation and mobility training. This professionalism was precipitated by requiring the minimal high educational standards that one expects of true professionals.

Mr. Kimbrough also relates that the orientation and mobility field itself attempts to scare administrators by relating "...the profession's past experience with unqualified instructors, haphazard training, and similar unprofessional attempts at providing the service of mobility." I have been involved in the field of orientation and mobility for several years and I consider myself fortunate to have been able to have seen a number of instructors who were given "in-service training" who have provided and continue to provide unsafe, sub-standard, instruction to clients that I have observed and subsequently worked with. In fact, this type of instruction still persists and hopefully, certification will eliminate and prevent the sub-standard and unsafe instruction given clients. It is only by setting and maintaining high standards that sub-standard and unsafe instruction will be eliminated.

Throughout the history of training personnel in the field of orientation and mobility, from Valley Forge, to Avon, to Hines, to the high-level professional standards of the graduate degree person, constant improvement in the field was attempted. The early staffs received special in-service training in orientation and mobility, and although some of these programs, which we admit, were basically good programs and brought to the field people who were selected and given some training, we still must go back to the conference of 1959 which set the needed high standards for professional orientation and mobility instructors. Needed upgrading of programs and personnel was accomplished over a long period of time by successive approximations in the upgrading (raising) of standards.

Mr. Kimbrough feels that it is not easy to chage contemporary things and he relates that it might be easier to follow tradition than establish what he calls unrealistic standards, but he does not want to admit that tradition was changed in a very forward-looking manner in 1959 when the standards for high-level professionals in the field of orientation and mobility were set. I feel that as a professional in a field that has come so far so rapidly, the field should not re-institute unstandardized in-service training programs, for this would set us back to the standards of 1948, over twenty years ago, even before graduate high-level professionals were thought of in the field of orientation and mobility.

Our field has grown tremendously and has matured even though our professional field is less than a decade old. Agreed, we have had growing pains and have made mistakes as all new professions have, and, we, as humans, might possibly continue to do so. However, as we have matured as a profession, we have attempted and succeeded in greatly reducing our errors. We must continue to reduce our errors and go forward as highly trained professionals and skilled people and we must not allow the field to be diluted and set back to the standards of over two decades ago. We must do so, not to give fodder to our egos, but we must do so, and continue to insist on basic high standards for the good of the blind that we are trained to serve.

TACTUAL MAPS - - A PROGRESS REPORT

By

Constantine N. Souris

During the past year a committee on tactual maps (Long Cane News-August, 1969) has been working in conjunction with Howe Press of Perkins School for the Blind toward the development

and evaluation of tactual maps. The areas in which the committee is presently involved include the development, application and evaluation of tools and methods of producing or reproducing tactual maps; symbols to be used; standardization of symbols and their functional use in orientation and mobility maps. Specific tools include tracing wheels for the production of individual maps and tactual stamps for use in areas where an individual stationary symbol is desired.

In order to appreciate some of the problems that exist in the production and use of tactual maps, several functional residential maps were produced. These maps were distributed for evaluation by practitioners as well as by the blind traveler who will be the consumer of such maps. The evaluation concerned itself with the practitioners' and consumers' judgment in regard to the feasibility of these maps for use in orientation and mobility. Areas of concern are simplicity, size, symbols, orientation and standardization. All the maps were produced and reproduced by Howe Press using the latest methods available.

The response to the initial map produced was favorable; many of the suggestions and comments will be implemented in future maps. It was revealed also that a blind person who has never been exposed to tactual maps might require some initial instruction in order to obtain maximum benefit from a map. This is especially true of congenitally blind persons who may be lacking in some of the basic concepts. It appears from this experience that tactual maps may not make travelers of non-travelers, but rather greatly assist a person who is already a traveler.

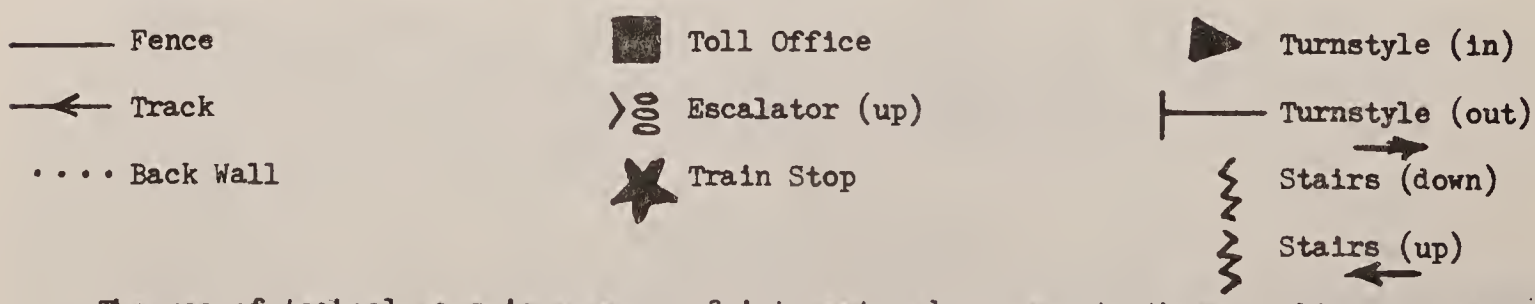
Since the initial maps were mass produced they did not provide an opportunity to make on the spot maps that may be of need for only one individual. The use of the "tracing wheel" and the "tactual stamp" was able to meet this need. Since both tools were equipped with standard symbols, some measure of uniformity could be achieved between maps produced and individual maps. Additional copies of individual maps may be made by using a thermoform machine.

Often we are confronted with need for material that will enhance the development of basic concepts such as straight, curved, parallel, etc. The "Mag-Stick kit" (developed by Howe Press) is of great help in this area. It is equipped with a metalic board and magnetic rubber strips of various sizes. The strips may be manipulated by the teacher, as well as the student, to make any form desired. The kit has been used at the Greene Blind Unit of the Walter E. Fernald State School as well as by other people teaching in the area of orientation and mobility. In the opinion of the people using the kit, it is an effective means of improving and developing basic concepts essential to orientation and mobility. Its potential, however, is only limited by the creativity of the person using the kit.

Many urban public transportation systems provide maps and literature to help their patrons to make better use of their system. With the advent of formalized mobility training, more and more blind travelers are capable of using these transportation systems. However, the information regarding the public transportation systems is limited or non-existent for use by the blind traveler. It appears feasible that those people who are involved in teaching orientation and mobility should also be the catalyst in the development of transportation maps for the blind.

In an attempt to meet the needs of blind persons in the Boston area several tactual maps were produced. The maps included a map of the subways as well as rapid transit routes. Of primary concern is the standardization of symbols representing various aspects of the subway layout, such as the location of stairs, turnstyles, tracks, etc. The method of production was the use of the "tracing wheel" and "tactual stamp" and the maps were reproduced by means of a thermoform machine. Copies of the maps were distributed at a recent meeting of the Interest Group nine of A.A.W.B. New England Chapter. Overall reaction to the maps appeared to be favorable. Below is a tentative list of symbols that have been suggested for use in the subway map. These symbols are presented for discussion purposes in the hope of stimulating constructive criticism and suggestions.

Suggested symbols for use in the subway map:



The use of tactual maps is an area of interest and concern to those working in the area of blindness. The concern is shared by people who are working in the area of mobility as well as those interested in mobility. It is the purpose of the following questionnaire to survey the

the opinions of this group concerning the feasibility of using tactile maps and the problems associated with them. Please complete the questionnaire and return it to the Tactual Map Committee.

MOBILITY INSTRUCTION

A Professional Challenge

By

Bruce Blasch and Berdell Wurzburger

Many criticisms have been raised since the concept of training mobility instructors at the graduate level was first conceived. Some of these criticisms revolved around such questions as: will mobility instructors be overtrained; does it take a Master's degree to teach a visually handicapped individual to wave a cane; will college trained mobility instructors be content teaching the use of the long cane? From these unanswered questions, various conclusions and criticisms have arisen and appeared in journal articles.

In an attempt to resolve the question of professional challenge and reinforcement in mobility instruction, data was gathered from the various colleges training mobility instructors. The colleges participating were Boston College, Florida State University, California State College at Los Angeles and Western Michigan University. The numbers of graduates from each of these programs range from 19 - 142, with a total number from all programs of 332. This total number of graduates represent college trained mobility instructors beginning in 1960 to the present time*. As of this date, the University of Pittsburgh and the University of Northern Colorada have not had any students complete their training in Orientation and Mobility.

Now, the question arises as to what are these 332 instructors of mobility doing? Are they working with the visually handicapped? Are they teaching Orientation and Mobility? Are they working with children and/or adults? Of this total number, 87%, or 289 mobility instructors, are still working with visually handicapped.

(Figure 1.) This includes graduates that started as mobility instructors and are now directors of agencies, superintendents, principals and program directors of residential schools and other such administrative positions.

It is also interesting to look at the 13% that are not working with the visually handicapped at this time. Approximately 3.3% are females who, due to family responsibility are unable to work at this time. However, this does not mean that these women, as some have demonstrated, will not teach mobility at a later date. An equal number of graduates, or 3.3% are working in an area other than with the visually handicapped. Approximately 2.5% of the graduates have returned to universities in order to obtain advanced degrees. About 2% are unaccounted for due to lack of communication. The remainder of the 13, or approximately 2%, are accounted for by retirement, military duties and working in Special Education but not specifically with the visually handicapped. To interject some humor, it might be said that some of the major reasons for not pursuing a profession of mobility instruction are those of, thirst for knowledge, service to the country and motherhood.

However, even though this 13% is small, it is unfounded to say these graduates are not teaching mobility because they do not find this teaching challenging. In other words, there are only 3.3% or a maximum of 5.3% of the mobility graduates who do not find themselves suited to teach the visually handicapped.

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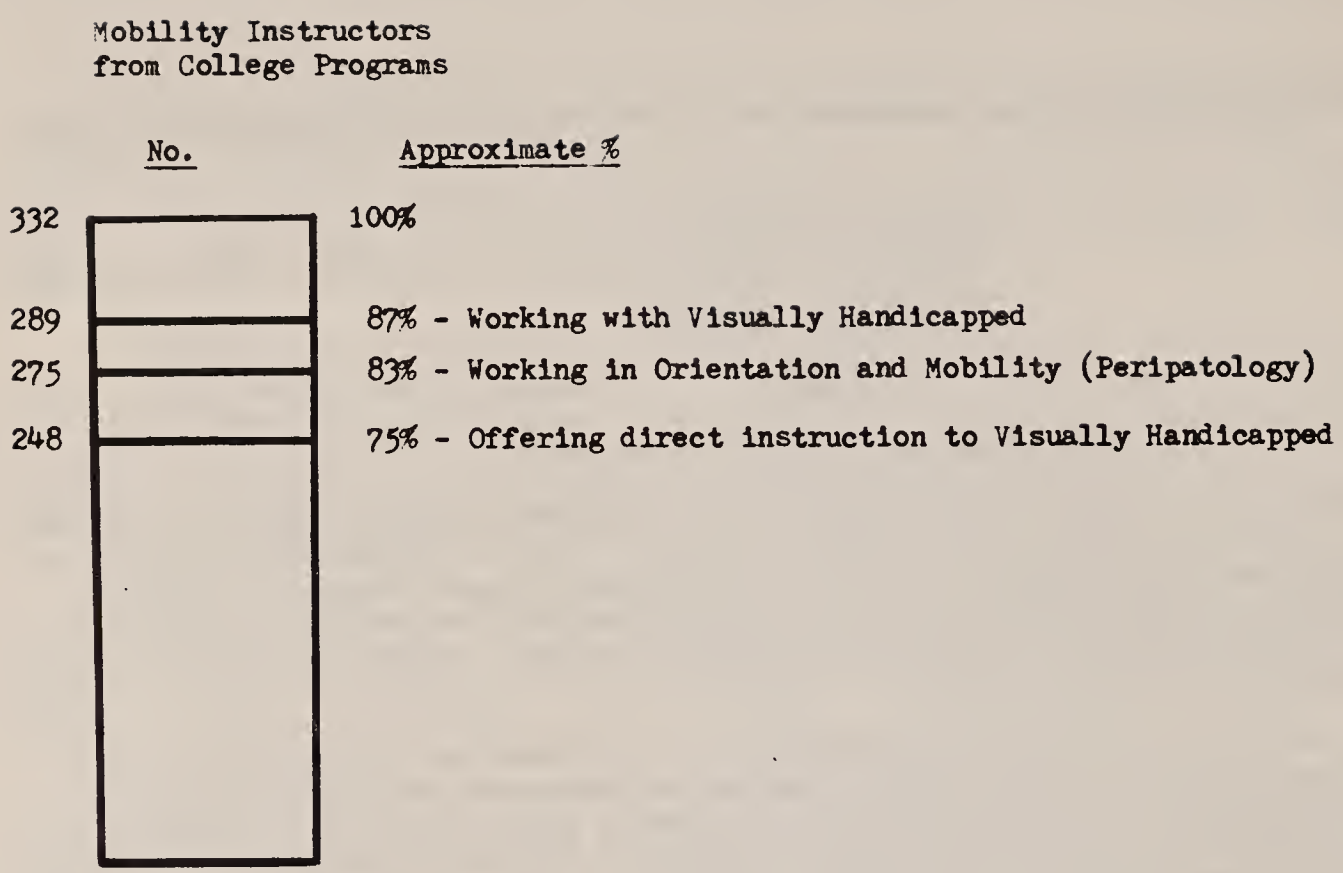
*Data was gathered and inclusive of April, 1970.

Figure 1.

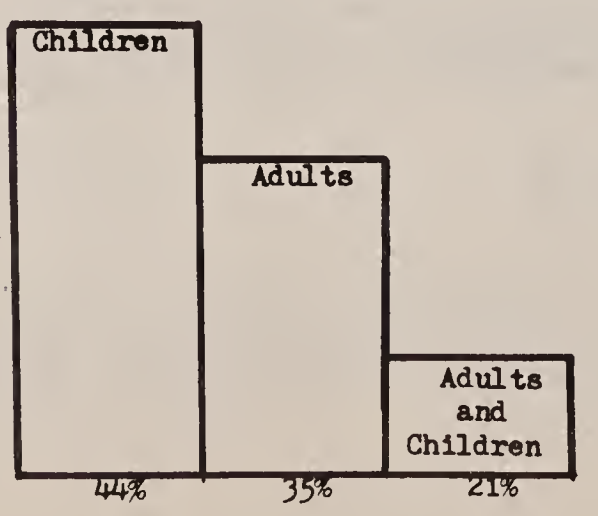


Of the 87% of the graudates that are working with the visually handicapped, over 95% (275) are directly involved with Orientation and Mobility. This included graduates who are now in universities training mobility instructors and individuals supervising and coordinating mobility instruction in schools and agencies.

However, the question may arise as to how many graduates working with the visually handicapped are actually out on the streets offering direct mobility instruction? Over 75% of the graduates are actively teaching Orientation and Mobility to visually handicapped individuals. This figure represent 248 graduates from the various mobility programs offering direct mobility training. This data is certainly not in support of criticisms mentioned earlier.

Therefore, mobility instructors are, in fact, finding their positions reinforcing. Initially, formalized mobility training began with the adventitiously war blinded adults at Hines V. A. Hospital. Today mobility instructors are offering their services to all age groups. It has been noted the 35% of the mobility instructors are working with adults, while 44% are teaching children. The remainder of the mobility instructors, or 21%, work with both children and adults. (Figure 2). Although formalized mobility instruction originated with adventitiously blinded adults, its success and application to children are evidenced in the number of mobility graduates employed to teach children.

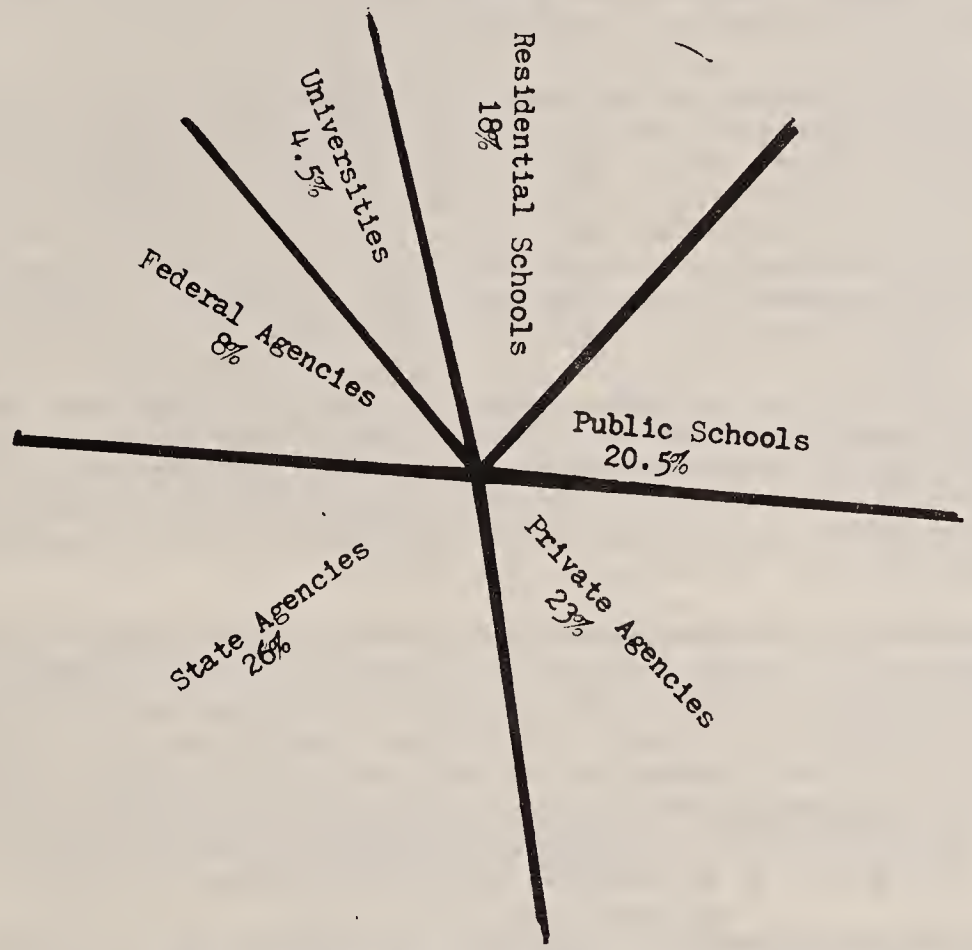
Figure 2.



The 289 mobility graduates have been employed by a variety of agencies and schools (Figure 3). It is important to note that Federal Agencies (where formalized mobility instruction originated), have employed 8% of the mobility graduates as opposed to training their own staff as was once necessary.

In summary, the data indicates that only 3.3% - 5.3% of the college trained mobility instructors are employed in areas other than with the visually handicapped. It is apparent from this data that mobility instructors are in fact continuing to work with the visually handicapped.

Firgure 3.



Place of Employment - Based on 289 Graduates

FUNCTIONAL VISION

By

James Doyle

Functional vision can be described as any vision from 20/200 to light perception that is usable. About 75% of the blind population comes under this definition. Very often, existed programs for the totally blind have been modified to meet the needs of this majority group. We do not believe this is a conclusive answer. A specially designed program to meet the needs of this group seems more appropriate. Since each client has a different degree of functional vision it is virtually impossible to be specific as to a program. However we have designed a series of guidelines and general principles we believe can be followed in teaching these clients.

First, an evaluation of functional vision should be completed by the orientation and mobility specialist. Through this evaluation it is determined how each client functions visually in practical situations. This is not in lieu of an ophthalmologist's examination or low vision clinic evaluation, but in addition to it. This evaluative tool should contain both indoor and outdoor situations. Various objects in the environment can be listed, such as: windows,

wall clocks, overhead lights, ash trays, street signs, crosswalks, mailboxes and curbs. It is important to note the size, shape and color of these objects, as well as the distance from which they were perceived. One must remember that these situational tests should be repeated under various lighting conditions. Special night lessons should be conducted containing many of the same elements mentioned above. The instructor should note if the client is using only visual cues during this evaluation.

The ability to see motion is more difficult to evaluate. We have developed a preliminary test that breaks motion into three parts: (1) client stationary and objects moving; (2) client moving and environmental objects stationary; and (3) both client and environmental objects moving. One of the important aspects to note is the client's ability to function as the situations become more complex. In cases we have observed, the client's reaction time was reduced by two-thirds as the situations became more complex.

This evaluation not only helps to determine the program needed, but can serve to point out to the client the upper limits of his vision. It will demonstrate areas where he will have to exercise caution and perhaps even secure sighted assistance. This evaluation has been helpful to our ophthalmologist as it gives him an idea of how the person functions in a non-clinical setting. It also provides the practical base for designing an individual functional vision program. Perhaps optical aids or a blindfold will be indicated. Whichever, this predetermined amount of functional vision should be used to its maximum potential. Arguments against not using the blindfold usually state that when the program is over and the blindfold removed, vision is a bonus. Actually, it can be more of a confusing factor than a bonus if the client does not know how to use it. For instance, one client who was blindfolded, then familiarized with an area and given specific objectives, located these with a minumum amount of difficulty. When the blindfold was removed and he was asked to travel in the same area, he became disoriented and was unable to locate the same objectives. He could not combine his techniques with his vision. This points out that the use of the remaining vision requires careful interpretation and feedback from the instructor to the client.

The program itself will, to some extent, be one of trial and error. The instructor will have to form hypotheses as to what he believes his client can see or thinks he can see. Through testing and re-testing, these hypotheses will be proven or disproven. To illustrate: A client veered every time he approached a sidewalk intersection near the corner. It was hypothesized and explained to him that he was looking for or following the contrasting grass line and when there was no contrast, he veered to look for it. It was suggested that when this phenomenon occurred, he should continue on his established line of direction and more than likely he would soon reach a curb. This proved to be true and the veering problem was ended.

The use of scanning and closure can begin early in the program. We define scanning as the effective use of head and/or eye movement to compensate for field loss. The client's ability to use scanning can often be observed during the functional vision evaluation. If, for instance, the person walks with his head and/or eyes down, he cannot adequately perceive field. However, this person can be taught to use his head and/or eye movements either up and down or side to side (sometimes both) to more effectively "clear" his path. With persons who have only central vision, it is very important that they check to each side to avoid obstacles and/or people. Those who have lost central acuity need to check the center but usually do not need to check as often as the former group.

We define closure as the ability to see only part of something and to make an educated guess as to what it is. During one of our evaluations, a client was asked what he could see on the wall of the Orientation and Mobility office. He replied, "It's either a map, a picture or a graph, and since this is a mobility office, I assume it is a map." This is a good example of intelligent guessing. This ability can be improved with training, interpretation and feedback. This can become a habitual part of a client's ability to better use his functional vision. Although our clients that are using the cane are taught all the techniques, we encourage them to replace these techniques with vision where plausible. This again has to be taught as the person will not automatically know which situations lend themselves to this principle. For example, a client might be able to visually follow a hedge to locate an intersecting sidewalk, thereby replacing one of the trailing methods. This tends to further define his limits and make travel a more enjoyable experience.

Objectives can be selected to make maximum use of each client's vision. A series of objectives in the business area can be designed that can be reached using vision as the primary means or the secondary reinforcer. If we assume that vision is also a "remaining sense" that we train, then it follows that objectives of this nature are as needed as auditory tactual and olfactory ones. The objectives can often be color-keyed. A change in color, whether the exact color can be determined or not, can be a significant landmark. It is possible that some objectives

are better determined from the opposite side of the street or from a distance because of contrast or better perspective. Color is not the only cue. Size, shape and lighting reflections can all be explored with the client.

Methods for locating objectives can vary. The client can be given the visual cue that he is to look for or he can be sent to the objective and told to report what visual cue (s) were available. A combination of alternating these methods is usually better. The instructor will have to help interpret throughout the training. Most "visual" cues and landmarks can be interpreted through common sense but so can most cane techniques; we have all witnessed how many of these are not commonly seen or used.

It should be noted that this vision does not have to be what is commonly called "travel vision" to be useful. Almost any remaining vision can be functional. If it cannot be used for mobility per se, it very often can be used for orientation. For instance, the ability to see the outline of a tall building can guide one as to the direction he is going or his relative position to the objective he is seeking. Using this limited vision just for orientation can reduce the mental and physical strain for the person who previously used this vision for both orientation and navigation.

One client stated that he felt his vision had improved at the end of the program. Although there was no real acuity improvement that could be measured, he was obviously using his vision more effectively.

Some clients will find the need for additional training if vision deteriorates or is lost. In the meantime, however, they will be safe, effective travelers no longer doubtful of their limitations. They will have made an adjustment to severe visual impairment. Later, they may have to make an adjustment to total blindness.

THE USE OF OPTICAL AIDS TO ASSIST THE PARTIALLY SEEING IN MOBILITY

From: LOW VISION SERVICES

By

Charles P. Koehler
Optical Aids Specialist

Many partially seeing persons both congenitally and adventitiously afflicted need mobility instructions to one degree or another. The remaining vision these people have should be used to its fullest to develop skills and techniques in travel. A large number of these persons could be further helped by use of visual aids.

The optical aids used for mobility can be put into two groups.

1. Aids to improve visual acuity

2. Aids to improve the environment

The aids used to improve the distance acuity are basically telescopic systems; the strengths of these aids range from about 2.5x to 10x. At the Lighthouse the aids found to be the most practical help are 2.5x and 6x. The 2.5x monocular is a simple focusable galleleon telescope. The 6x is a 6x30 prism monocular. Because of the small field and difficulty in controlling motion the 10x has not been a very practical aid; the 10x has been recommended only where there is a specific need for high magnification or where the partially seeing person has to view an object from a great distance. All of the telescopic devices used are hand held.

Environment Aids

Environment aids are aids that assist the partially seeing person in mobility by varying the light conditions for the client to enable him to make more efficient use of his remaining vision; the aids are sunglasses of varying degrees of light transmission.

Sunvisors - those that are worn on eye glasses or worn as a cap.

Sunglasses - sunglasses can be obtained with lenses that transmit any amount of light desired. The most common amount of light transmission for sunglasses is about 20% - this is the average found in ready made sunglasses. By trying varying degrees of light transmission lenses with clients, the following strengths have been found to be most satisfactory depending upon the individual needs and preferences--they are 20% light transmission, 30% light transmission and 50% light transmission. These strengths are included in the aids used by Mobility Instructors.

Tints that would be needed, lighter or darker, would be recommended on an individual basis by the examining physician in a Low Vision Clinic.

Visors and visorettes have been found helpful for many persons whose major light problem is too much light on the horizon level. Quite often a large brim hat is just as efficient for persons needing this type of sunwear.

Recommending Optical Aids for Mobility - The recommendation for purposes of mobility should come from the low vision services. The type of aid recommended should be based on the person's visula acuity by diagnosis, needs and motivations. Persons whose vision is too little should not be given an aid with minimal magnification as it will not do sufficient good and may tend to make the person become apprehensive. The converse is also true--giving a person an aid that goes beyond his needs in mobility may be cumbersome and an unnecessary aid. In some cases it is possible to give the client a choice in either selecting a distance aid or in selecting sunwear. In most cases the aid can be pre-determined. The density of sunglasses is usually based on the person's needs for protection against bright light, coupled with his visual acuity and how much acuity loss there is by wearing dark glasses. Very light and very dark glasses are recommended at the time of the person's low vision or general ophthalmological examiniation.

There are some diseases that would require a patient to wear specifically designed or prescribed glasses, special aid for specific needs. At times the telescopic aids used in mobility can be adapted for a client's specific needs; additional lenses can be included to change the focal length of these units. The exact working distance and size of image are necessary to achieve this.

LOW VISION AIDS, MONOCULAR AIDS, AND SUNWARE USED IN DIAGNOSTIC ORIENTATION AND MOBILITY PROGRAM AT THE NEW YORK ASSOCIATION FOR THE BLIND

By

Suzanne Petrizzi, Peripatologist and Diagnostic Evaluator

During the Four-Week Diagnostic Program, the partially sighted clients are introduced to the low vision aids, monocular aids and sunware.

Before trying out any of the aids, the diagnostician must refer to the medical eye report on the partially sighted client. This information could be found on a medical card which is presented to the diagnostician. On the back of this card there is a section for monocular aids and sunware. Usually, the partially sighted client has been seen by the low vision clinic before coming into the Diagnostic Program. Therefore, the back section of the card may have suggestions for the diagnostician as to what type or types of aids the diagnostician should use to evaluate the partially sighted client. If additional information is needed, the diagnostician should call the low vision clinic and get in touch with the low vision expert and discuss any additional information wanted.

The diagnostician must discuss with the client the travel aids and their proper use. It should be explained to the client that a particular may help him to read street signs, traffic lights, subway stops, bus stops, and commerical signs. The diagnostician should evaluate the partially sighted client in both a well-lit area and a dimly lit area. The diagnostician should stress the point that this is an evaluation and may or may not prove to be useful. Also, the client should be reminded that the aid or aids are not toys and are only beneficial if properly used.

In order to evaluate the partially sighted client, the diagnostician must give some instructions. General instructions include the following:

1. Show the client the proper way to hold the aid.

2. Show the client how to focus the aid.

3. Allow the client to practice the ability to quickly focus the aid.

4. Show the client how to focus street signs, house numbers, subway stops commercial signs.

5. Show the client how to find a sign post first and follow the pole up to the sign. Keep in mind that

   (a) most traffic lights and street signs are located near or on a street corner.

   (b) house numbers are usually located on or near the door frame.

   (c) commercial signs are usually located above the main entrance to the store. The client should focus in the main entrance and scope up to the sign, and read from left to right.

6. Advise the client that he should stress the logical location of what he is trying to find.

7. Encourage the client that the travel aid becomes more practical through practice and use.

8. Allow the client the practice of riding subways, buses, and using the aid sitting and standing. Wait until the subway train or bus stops, and then focus.

9. Remind or caution the client that while traveling, he uses a combination of his sensorium and this aid has to be used in conjunction with the rest of this combination.

After completing the instruction, practice and evaluation in the use of the aid or aids, the diagnostician can come to a conclusion about the client's efficiency and need in the use of the aids. Then, a decision can be reached for recommendations to the low vision expert as to which aid or aids would be the most beneficial to the client.

The diagnostician works hand in hand with the low vision expert, who is also a part of the diagnostic team. By reporting the findings to the low vision expert, the client is re-evaluated by the experts in the field and the final decision as to the most suitable aid for the client is made by these experts.

AIDS AND SUNWARE

1. One-eye occluders
2. Double occluder (blindfold)
3. Visorette
4. 2.5 monocular
5. 20% sunglasses - dark
6. 30% sunglasses - medium
7. 50% sunglasses - light
8. Polaroid clip-ons
9. Polaroid clip-ons--flip-up
10. Lenses

Aids and sunware found to be the most helpful and most popular with the partially sighted clients during evaluation are listed below in the order of the most popular to the least popular:

Aids:
(1) 6 x 30 monocular (Selsi)
(2) 2.5x monocular (Selsi)

Sunware:
(1) 30% - medium
(2) 50% - light
(3) 20% - dark
(4) Polaroid clip-on--Flip-up

EYE DISORDERS AND ACCOMPANYING CONDITIONS RELATED TO LOW VISION

Some abstracts from "A Worker's Guide to Characteristics of Partial Sight" - Eleanor E. Faye, M. D. and Clare M. Hood, R. N.

APHAKIA	non progressive, average or bright light preferred, loss of accomodation, spectacles will cause distortion due to magnification and restriction of visual field, physical activity may be limited, may be on medication.
MYOPIA	progressive or non progressive, peripheral or central field loss, defective night vision, defective color vision, average, bright or dim light preferred, physical activity may be restricted, may be on medication.
PRESBYOPIA	progressive, interference with near work, if myopic removal of lens will aid, if hyperopic - removal of lens will aggravate.
COLOBOMA	progressive or non progressive, peripheral field loss, bright or average light preferred.
ANIRIDA	progressive, average or dim light preferred, may be on medication.
GLAUCOMA	progressive or non progressive, peripheral field loss, bright or average light preferred.
CATARACT	progressive or non progressive, average or dim light preferred, may be on medication.
CORNEAL GRAFT (recent)	non progressive, average or dim light preferred, physical activity may be restricted, may be on medication.
CORNEAL SCARRING	non progressive, bright or average light preferred.
RETINOCHOROIDITIS	progressive or non progressive, peripheral or central field loss, bright-average-or dim light preferred, may be on medication.
RETINITIS PIGMENTOSA	progressive peripheral field loss, defective night vision, bright or average light preferred.
MACULAR DEGENERATION	progressive or non progressive, central field loss, defective color vision, bright, average or dim light preferred, may be on medication.
UVEITIS	progressive, bright or average light preferred, may be on medication.
DETACHED RETINA	non progressive or progressive, peripheral or central field loss, defective night vision, bright or average light preferred, physical activity may be restricted, may be on medication, phosphenes.
DIABETIC RETINOPATHY	progressive, central field loss, defective night vision, bright or average light preferred.
EALES DISEASE	progressive, peripheral or central field loss, defective night vision, bright or average light preferred.
OPTIC ATROPHY	progressive or non progressive, peripheral or central field loss, defective night vision, bright or average light preferred.
HEMIANOPSIA	peripheral or central field loss.

DON'T REARRANGE THE CLASSROOM! WHY NOT?
A PROPOSAL FOR MEANINGFUL CLASSROOM MOBILITY

By

Leo Glenn Randolph

I. Introduction:

Ever since entering the profession of teaching Orientation and Mobility, I have often heard the plea from various classroom teachers, "Don't change the classroom around". Apparently, the reasoning behind this idea is to alleviate confusion in the classroom and to reduce anxiety on the part of the young blind child. Classroom teachers might contend that a reduction in overall confusion would be just cause for not changing the classroom around and causes anxiety on the part of students. (Not to mention the anxiety of teachers!)

Speaking from an Orientation and Mobility standpoint, it is my opinion that we should rearrange the classroom from time to time, pending the following:

A. That the classroom is composed of students with no severe retardation present.

The exclusion of students who are classified as innately retarded is strictly a personal choice due to a lack of experience with this group. I have reservations about including them in this proposal. In most schools, the mentally retarded, the severely emotionally disturbed, and the brain damaged children are usually (or should be) given a classroom or exceptional unit all to themselves. I would suggest that the report from the school psychologist be obtained before any exclusion is made so as not to include those whose responses to stimuli would be abnormal.

B. That the rearrangement would be beneficial to the ones who are partially sighted. If any of the children in the room have useful residual vision, they should be placed so as to obtain the maximum functioning from their vision.

C. That the students be permitted to help with the movement of desks, etc. The movement should be geared to a reference point which will remain stable throughout the move.

As the student is helping move a desk, relate the direction of the move from the original position, and if practical, give the distance in feet. Use the door as a reference point and also the desk of the teacher if it is not to be moved. Since it is very difficult to give instructions in clear, concrete, intelligible terms, the teacher should be careful in the choice of words. Vague terms such as "here", "over there", yield little results and are confusing. As the student is in the process of moving a desk, use terms such as "right of", "left of", "back of", "in front of", etc.

Also, use this opportunity to make the student feel a part of what is taking place. So, as much as possible, give verbal directions in conjunction with the tactual input which the student is receiving, while in contact with some piece of furniture.

D. That the classroom teacher is willing and able to teach orientation and familiarization to a room.

If at all possible, the Mobility Specialist should set up an in-service training program for the teachers. This will enable them to know the basics of Pre-Cane techniques and the correct approach to room familiarization.

Skills:

1. Trailing: The act of using the back of the fingers to follow lightly over a straight surface. (e.g., wall, table, desk, etc.)

2. Use of Sighted Guide: A blind person lightly grasping a sighted guide's elbow while taking a walk.

3. Upper hand and forearm: The act of extending the forearm and hand in an obtuse angle across the upper portion of the body while walking.

4. Lower hand and forearm: The extension of the arm in a diagonal position across the lower abdominal portion of the body while walking.

5. Squaring off: The act of aligning the body with a straight lined object with intentions of projecting one's line of travel in a desired direction.

6. Direction Taking: To enable one to obtain a general line of travel through the use of straight lined objects or by interpretation of auditory clues, while in motion.

The classroom teacher can greatly enhance the student's early mobility habits by knowing the techniques and by reinforcing what the student should have already been taught in mobility lessons.

E. That the arrangement is conducive to systematic relationships.

1. Use of Compass: Explain that the student is moving closer to the North wall, South wall, East or West. After the seating arrangement has been made, orient the student to the compass as to which direction he is facing, what direction is to the right, left, etc.

2. Use of geometrical concepts: If the rows of seats are aligned in parallel fashion, the concepts of parallel and perpendicular may be taught quite easily. Many classrooms today are arranged without rows or aisles, in which case, the concepts of circular, square and rectangle can be taught.

3. There should be some meaningful placement of desks and tables instead of a "hodge-podge" system.

To further the discussion, I would suggest that it is possible that by purposely not rearranging the classroom occasionally, we might have based our reasoning and professional practices on a false premise. If we have missed the point, then haven't we taken a negative approach to the developmental trends of concept learning, and thus deprived the child of experiences for learning?

According to Klausmeier and Goodwin in their book, "Learning and Human Abilities", the environment plays such a vital role in the educational development of children, that the I.Q. level can be affected negatively or positively. Their estimate is that by age eight, the I.Q. level can vary sixteen points when approximately 80% of the mature intelligence has been reached. Therefore, since the elementary classroom serves as the educational environment, it is most imperative that we do not deprive the students of any form of learning experience from which they must form concepts.

It is unfortunate but true that many of our congenitally blind children perform tasks by a rote process rather than by meaningful learning. The development of rote learning habits in childhood is detrimental to his functioning ability, as it excludes the acquisition of concepts and, therefore, eliminates the possiblity of any useful transfer of training into adulthood. If a blind student persistently negotiates a route by memorization, he will become inadequate to reorient himself when lost or to employ proper corrective measures while in stressful problem solving situations.

II. Suggestions For Rearrangements:

We now approach the elementary classrooms with some suggestions along the line of proper Orientation and Mobility techniques, for the consideration of those who teach these children.

A. Change the seating relationship between students at least three times per school year. By doing this, I mean, permit the students to sit in different positions to each other.

Example: If Billy sat in the front of the room during the first part of the school term, permit him to sit at the back of the room during the second three months. Move him to the outside wall, near the windows, for the remaining three months of the year.

This arrangement will have several advantages.

1. It will compel him to continually interpret and use sound clues which are originating from a different place in the room, as compared to the previous seating arrangement. This will be most beneficial to him in regard to sound localization and discrimination, both of which are important aspects of a blind person's mobility.

2. The student must approach the teacher's desk, the door, the braille supplies, etc., from a different angle, therefore encouraging meaningful movements and less rote learning. His "runs" will be from different sections of the classroom and will enable him to arrive at his objective via an alternate run. The ability to rationally arrive at solutions, both inductively and deductively, is a precious commodity in the functioning ability of a blind traveler.

3. It will provide opportunity for developing readiness skills in Orientation. Sitting in a seat in a classroom which has an outside wall on the East, he learns that the sun shines through only in the mornings. A later year he may be placed in a room with windows on the West side. Therefore, he will learn that the sun rises in theEast and sets in the West. If he never gets to sit by a window, he might be deprived of this experience and the knowledge of how to use the sun in his future mobility.

4. He learns the physical arrangement, similarities and consistencies of his environments. Things will become apparent such as the door of the room being on the inside wall, or that the radiators are generally placed below the windows on the outside wall. He will learn that the book shelves are usually alongside the walls, that the door knob is approximately the same distance from the floor on all doors. Later, in his adulthood, he will learn that the street patterns, the block sequences of residential neighborhoods as well as business districts, and the general plan of one city is similar to that of another. We need to take advantage of the child's elementary years to teach these basic concepts.

B. Rearrange the Furniture at Mid-Term.

1. Make use of compass directions.
   Relate the direction of each of the student's desk. "Closer to the North wall", "Nearer to the East wall", etc.
   Make sure each student understands the direction he faces and which directions are to the right and left. Ex. "You are now facing West, Susie, North is to your left". (Enlarge as needed)

2. Make use of "right", "left", "back of", "in front of", "forward", "backward", etc.

3. Provide sessions for the student to mentally map out different routes to the door, the braille supplies, the teacher's desk, etc., and to verbally express these routes to the teacher.

   It will be somewhat confusing for a while but should prove to be beneficial to the students' mobility in the long run by a continual reshuffling of the mental images. This will afford an environment which challenges the students' thinking and will give them a better understanding of relationships.

III. Criteria For Changing The Classroom:

These are for the benefit of his Orientation and Mobility techniques and do not necessarily hold true in other areas.

A. It is reasonable to assume that it should discourage rote learning.
   The student is compelled to travel by means of sound localization, meaningful movements, interpretation and discrimination of environmental clues, a consciousness of turns and by less memorization.

B. It is very probable that it would enhance his problem solving ability.

The child's educational system should be based on a progressive sequence so as to continually force him to think, plan, logically deduct and arrive at solutions. If the sequence does not progressively become more difficult, there will be no challenge to the mental growth processes, and, therefore, result in a limited range of concepts.

Hopefully, the acquisition of problem solving ability will carry over into his adulthood Orientation and Mobility.

C. It assists his awareness and adaptability to a changing environment. By providing him with a safe, controlled atmosphere in which to correct his mistakes without the fear of being physically hurt or hopelessly lost, he has an opportunity to properly channel his response to stimuli, without the restrictions of time or stress, therefore increasing his tolerance level.

The world is definitely sight oriented, but a blind person must learn to adapt to his environment, whether it changes or remains stable.

D. It encourages independent mobility.

E. It encourages the use of Pre-Cane techniques.

After the Mobility Specialist has taught the student Pre-Cane skills, he will need much reinforcement from the classroom teacher. Therefore, it will aid the student individually and will add continuity to the overall program.

F. The student learns to use direction indicators in a practical situation, with hopes of a high degree of transfer to most mobility situations.

IV. Techniques for Room Familiarizations:

The approach should be different for congenital children than for those who are adventitiously blinded.

<u>Methods:</u>

A. Perimeter Method:

1. Have the student walk around the room trailing the wall.

2 Explain the make-up of each wall by saying, "The North wall has...."

3. Verbal directions should be given in conjunction with the student's contact with the wall. Describe the articles of the room and their strategic position.

B. Door-Object Method:

1. Use the door as the major point of reference.

2. Have the student move from the door to the object, (his seat, teacher's desk, etc.) and from the object back to the door.

C. Criss-Cross Method:

1. By using the lower hand and forearm technique, have the student walk across the room and back in both directions.

2. Relate compass direction as he walks.

3. Note the objects in his path.

D. Object-Object Method:

1. After gaining some knowledge of the various things in the room, he should walk from object to object in order to gain a knowledge of their relationship.

2. This method establishes for the student the relative position of his own desk to other objects in the room.

This proposal is submitted with the hope that it will aid those who teach elementary children, who are either attending public school or are students of a residential school for the blind.

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PROGRESS OF THE MIDLANDS MOBILITY CENTER IN BIRMINGHAM, ENGLAND

By

Robert Crouse

The establishment of the Midlands Mobility Centre, Birmingham, England, was ably reported by Mr. Stanley Suterko in a previous issue of this newsletter.

I was fortunate enough to be selected to succeed Stan Suterko as Chief Instructor at the Centre beginning August, 1967. The Centre was founded in August of 1966 by a grant from the Nuffield Foundation to the University of Nottingham. This came about as a result of the efforts of Walter Thornton and Dr. J. A. Leonard. The original project was to have been two years in length, terminating late Summer, 1968.

The purpose of the Midlands Mobility Centre was to demonstrate the feasiblity of non-residential mobility training for blind persons. This was to be achieved by:

1) training of blind persons in the use of the long cane, and

2) training of sighted mobility instructors.

During the first year of the project seven instructors were trained along with one extremely competent blind person. While these figures seem relatively small, the quality was excellent and a start had been made, despite stubborn resistance to the long cane.

The mobility device which proved so successful in the U.S.A. was not readily accepted in Great Britain. The resistance took many forms. Many people thought of it as another American gimmick thrust upon them. Others felt the cane to be excessively long for the crowded congested conditions prevalent in their isles. A few people even resisted acceptance of the long cane because it was a new system. To them the traditional methods of travel were adequate in meeting their mobility needs.

The majority of blind travellers in Great Britain use a cane aptly called the "short stick." It is a multi-sectional collapsible cane, usually about forty inches in length. The short stick has survived due to prevalent architectural conditions in the country. Unlike America, the vast majority of houses in Great Britain have enclosed or walled-in front gardens. In effect, the sidewalk is bordered on one side by an almost continuous wall, broken intermittently by driveways and streets. Many persons were able to follow these walls and move about with a degree of success.

Despite this factor, many short stick users wanted a cane method that would give them better protection, added freedom from strain, improved posture and acceptable appearance. In total a more independent and efficient brand of mobility.

When I arrived to begin work at the Center, I faced a situation much different than that which confronted Stan Suterko only a year earlier. Due to the dedication and perseverance of Leonard, Suterko and Thornton several local authorities had requested training of sighted mobility instructors. Also, a waiting list of blind clients had been formed.

In addition, during his year Stan had trained two teachers of blind children and they had been recruited for our staff as my assistants. These young ladies, namely, Miss Mary Hulme and Mrs. Joan Seddon, were of invaluable help in the development and eventual success of the Centre. Their teaching skills were magnanimous and the results they achieved with our blind trainees were highly commendable. They also had much to do with the establishment of a marvelous 'espirite de corps' that soon became evident at the Centre.

During the second year thirty-three blind persons were successfully trained in the use of the long cane. The age range was from 16-72 years and was distributed as follows:

16 - 25 years	-	8 clients
26 - 39 "	-	5 "
40 - 55 "	-	12 "
56 - 69 "	-	5 "
70 or over	-	3 "

Included among these clients were several person with multiple disabilities ranging from partial hearing loss or diabetes to brain tumor. Many had never travelled outdoors alone since onset of blindness. Some were quite skillful in mobility in their own way. Nearly fifty per cent of these determined clients were able to complete an advanced training programme. This included travel into the busy town centre of Birmingham, which has a population of over two million. All training was based upon the individual's aptitudes and skills but specifically designed to fulfill his needs in mobility.

The second year saw our instructor output increased to fourteen. Better still, training programmes were increased up to a present maximum of six months in length. The original training was usually accomplished in a crash course of twelve weeks. Our training programmes took on three basic forms:

1) A 'Short Course' of twelve weeks in length for person who were qualified and experienced home teachers. No period of supervised instruction was completed but follow-up field visits were made to the person's home area during his initial work with blind clients.

2) A 'Regular Course' of six months duration for persons with no training or experience in blind rehabilitation. Included in this scheme was a 12-week term of supervised instruction of blind clients at our Centre.

3) A 'Special Course' was available for students attending the Birmingham University Certificate of Blind Teachers Course. They were part-time students with us for one full year and also did a full-time 12-week internship at our Centre.

We tried to achieve three basic aims with the various programmes of instruction. Firstly, train good home teachers for those local authorities that could not send anyone for a longer period of time. Secondly, creating a new profession by recruiting personnel previously untrained or inexperienced in work for the blind. Thirdly, by training teachers at the University we would hopefully meet the needs of the schools for the blind.

During the second operative year seven instructors completed the six-month course and the remaining five the shorter twelve-week scheme. We were most fortunate in being able to recruit high quality persons into our program

The training schedule included the usual blindfold work with the cane. The academic side was comprised of lectures in audiology, anatomy of the eye, adjustment to blindness, congenital blindness, and multiple disabilities. Several interesting field trips were part of the curriculum. Also, each instructor candidate made weekly observations of blind persons in training by our staff members. Since this was only our prototype curriculum, several innovations will be installed for the present year. Among these will be a specially designed unit on the principles of learning and teaching, lesson planning and reporting procedures.

The design of the curriculum for instructors was dependent upon several factors. Firstly, it was determined that a U.S. type programme based at the university level was not feasible for Great Britain. The facts were self-evident. Not more than five per cent of British students ever attend a University. University degrees tend to be more specialized, somewhat similar to our graduate study programmes. Recruitment at this level would have been hampered by the rigid admittance requirements of the universities.

Secondly, the majority of the mobility positions would be available in the field of rehabilitation of adults. The schools for the blind were somewhat slow in coming forward to take advantage of the training. The problem takes a more complicated character when one realizes that school teachers receive much higher salaries than home teachers. We decided that to train teachers at the University level and then, in turn, ask them to accept the lower home teacher salary would have been absurd. As it is, the beginning home teacher in Great Britain earns the equivalent of $2,100.

This situation tends to make one feel that these standards were far below those set by the U.S. mobility programs. However, one must fully appreciate the British educational system before passing final judgment. Whilst we do not have ample time nor space to explain it in total in this paper, I shall try to condense the description. The educational system during the primary grades is much the same as ours. At age 11-12, the youngster is then placed into what we would call a "track system." The difference being that the "tracks" are broken into separate types of schools. It is unlikely that a non-grammar school child would ever attend university. As it is, grammar school students must also take various advanced course of study and several qualifying examiniations to pursue study at the university level. It should suffice to say that the grammar school student is the equivalent of our college sophomore or junior.

Teachers are educated in special teacher training colleges whose sole purpose is just that. After grammar school a prospective teacher would attend one of these special colleges for two or three years, depending upon previous study and qualifications.

We designed our minimum qualification for acceptance at the post grammar school level. We also required the applicant to be at least twenty-two years of age and to possess a good work record. The level of our candidates would be representative of a median between the last instructor training done at Hines and the early graduate program at Western Michigan University and Boston College. We have aspirations of developing into a special type of teacher training college. As our present standards are increased annually, it is hoped that we can soon increase the program up to nine or twelve months duration. Ideally, the temporary twelve-week scheme will soon be dissipated.

The second year of the project was to have been its last, but due to the successes achieved, the Nuffield Foundation granted an extension until September, 1969. The third and final year of the project will be dedicated to the establishment of the Midlands Mobility Center on a permanent basis. Applications for instructors are nearly filled for the entire year.

This Center has provided several important facets in the development of the Long Cane in Great Britain.

First and foremost, was that it provided a Center where instructor training on a professional level could take place. Also, that blind persons could be trained accordingly to demonstrate 'in the flesh' the feasibility of the method.

Secondly, information pertaining to long cane mobility could be accumulated and dispersed. In addition, research into the problems of mobility in conditions prevalent in this country could be investigated.

Thirdly, at the termination of my tenure in 1969, the staff at the Center will be totally British. This factor is of utmost importance for future development of the Long Cane in Great Britain. All of these people are former teachers of blind children and are the equivalent in training to any product of our U.S. graduate programs. Each has received advanced instruction at the University level in addition to attending the course at M.M.C.

The most intriguing facet of the progress of the Midlands Mobility Center has been its fantastic rate of growth. In a little over two years it has grown from an inception to a fully functioning Center with a professional staff of four. There has been no Hines to set an early precedent or any luxury budgets to work with. The American examples have aided this growth greatly. But, in the end the program in G.B. had to be specifically designed to fit the needs and framework of this country.

Lastly, blind people themselves have tried the method and have accepted the cane on its own merits. The Long Cane Method is being taught by qualified instructors at the local level, in rehabilitation centers, and in a few schools for blind children. It is these instructors working in the field and the products they develop, that will determine the final success of the Long Cane in Great Britain.

AN UNFUNNY THING HAPPENED ON THE WAY TO THE FORUM

By

David L. McGowan

Most educationally oriented fields desire to know whether a potential subject has a minimal background in order to be successful in a planned training program. The literature in the field of orientation and mobility contains a small number of articles dealing with "readiness" for training. Among these is "Research on Criteria for Measuring Mobility Readiness of Adventitiously Blinded Adults", by William E. Patton, (The New Outlook for the Blind, March, 1970). This article relates that "Fourteen criteria were found to have a positive relationship to both the readiness scores and the actual subsequent performance score." In reality, this is not the case.

In this era that is "publish or perish" oriented, this study is deficient in several aspects of design. Some of the results reported could not be inferred from the information presented: (1) experimental design; (2) data collection; (3) the utilization and interpretation of the statistical anylyses.

(1) Experimental Design: The study is ex post facto in design, implying a lack of experimental control over the variables since they exist only in situation. These reported data were literally "created" at the end of Grant RD-1693-S and were neither a part of a true experimental design nor the grant plan. A correlation study is not considered to be one of the stronger statistical tools available to a researcher, for it is possible to pair the most disparate pair of variables and grind out corresponding useless values of a correlation coefficient. A correlation study investigating the relationship between the numbers of shares sold on a given day on the New York Stock Exchange and the temperature in Ouagadougou, Upper Volta, would be an extreme example. Another factor to be considered when assessing the relevance of a correlation study is the principle of multiple causation. One must be reasonably sure that an expected association exists essentially by itself and is not the result of some other latent factor or factors. Correlation can be affected by unreported extraneous variables. In addition, correlation is a necessary but not a sufficient condition for "cause" and it must be remembered that correlation does not imply causation. Often correlation studies are presented, as Patton's study appears to be, as an example of post hoc ergo propter hoc logic.

(2) Data Collection: Data collection concerning readiness can be confounded in several areas as can all subjective measures. The author utilized 14 criteria as variables. In essence, a five-point ranking scale was utilized (exceptional/above average/average/below average/fairly poor) to rate each variable. In such five-point scales, a three-point scale could be more effective since the extreme high and low scores would tend to be assigned less frequently than they might be because of the psychological loading of the words utilized in this particular study.

The author relates that most of his criteria could be rated objectively. This is not so. Of the 14 criteria, only two (hearing and intelligence) could be related objectively. The author related that in the case of hearing, a rating was assigned "when possibel from a medical report or audiogram." An audiogram would be an objective measure while a rating from a medical report would obviously be subjective. In most cases reported (rating from a medical report), he fails to say how a rating was assigned. He relates that intelligence "when possible was related from a psychometric examination." He hopes the reader assumes that this "psychometric examination" is a single psychological instrument and not the several different instruments that were actually utilized. Where a quantifiable score could not be utilized, he again fails to say how a rating was assigned. The author also presents a table (Table 1) showing how an arbitrary average rating was selected. The arbitrary average is acceptable but could have been utilized more effectively in a three-point rating scale, e.g. (below average/average/above average)

Of the N=61, six were reported as having their orientation and mobility scores adjusted, thus changing an important variable. These six subjects could have been dropped from consideration and quite probably would not have affected the results of the study significantly. The orientation and mobility scale used was changed in the middle of the grant period from a five point to a three-point rating scale. It was reported that z scores were assigned as the measure of orientation and mobility performance. However, it is not customary to use z transformations on ranked data. The five-point scale could have been (as mentioned previously) changed to a three-point scale more validly than the reported z transformations. Also, if ratings are used as criteria, one finds that the ratings then would be unreliable because of the nature of the trait rated, lack of knowledge of the ratees by the judges, and a multitude of other obvious errors associated with ratings.

(3) The Utilization of and the Interpretation of the Statistical Analyses: It was reported that validity coefficients of 0.49 and 0.54 were calculated between the readiness and performance scores. This is not surprising since most validity coefficients fall between 0.40 and 0.60, with a median around 0.50. For the validity coefficient of 0.49, a k of 0.87 is calculated meaning that an index of forecasting efficiency of 13 percent is obtained. For the validity coefficient of 0.54, a k of 0.84 is calculated meaning that an index of forecasting efficiency of only 16 percent is obtained. Even if the reported validity coefficients were "true" and correct, the implication of these may be considered minimal when the work of gathering data on a cost effective basis is considered. In addition, and more importantly, the elementary, obvious and logical step after computing a validity coefficient is to set up a regression equation for the data so that meaningful predictions can be made for other individuals. This was not reported because it was not done as it should have been.

Patton's table of eta (Table 2) and his subsequent inferences are ludicrous and an insult to a knowledgeable consumer of research. He did not perform a test of significance on each eta, a cardinal sin among statisticians. He proudly reports, "That 14 criteria were found to have a positive relationship to both the readiness score and the subsequent actual performance score." This statement is prima facie evidence of jobbernowlism, for a rudimentary course in first semester freshman statistics tells one that the mathematics of eta can only yield an algebraic sign that is always positive and never negative. Consequently, it must only be considered as an index of the closeness of the relationship between two variables, and not as an index of the direction of the relationship as is incorrectly reported. His claims of a "positive relationship" could actually all be negative relationships. Obviously, this would have implications other than he tries to present. His reported "results" simply cannot be held tenable.

In summary, Patton incorrectly reports that the "...research study appears to have identified important specific factors related to readiness for mobility service. Although the relationship between the resulting research instrument and performance does suggest its usefulness in assessing readiness, further research is indicated." It should be suggested, however, that further research be done in this area and that a more correct utilization and interpretation of statistical analyses is indicated.

THE RUBELLA LIVING UNIT-
THE FIRST TEN MONTHS IN THE GREEN BLIND UNIT

By

William S. Dolan

THE PROBLEM--In 1963, '64 and '65 a Rubella epidemic spread througout the United States moving from the East to West coast. Women in the first trimester of pregnancy, who came in contact with Rubella, began with great frequency to give birth to defective offspring. It soon became evident that these children had multiple physical and emotional needs; they were rapidly appearing on the rolls of agencies serving the handicapped. Those children deemed educable were placed in an educational setting; their less fortunate counterparts were either at home, or being provided custodial care in institutions for the retarded.

The Deaf-Blind trainable, mentally retarded, pre-school children, many of whom showed the effects of post maternal Rubella syndrome, were in residence at the Ramsone E. Greene Blind Unit of the Walter E. Fernald State School, Waltham, Massachusetts. They presented unique pro-

blems for the ward staff, who provide the children with excellent medical and custodial care. Because of their multiple sensory deprivations which made communication difficult, and because of their perpetual hyperactivity and their seemingly fearless mobility, the children were a hazard to themselves and to the others in the ward. To insure the safety of these children they were confined to their beds the major part of the day. While this policy provided safety it was obvious that the children were regressing, especially in the motor skills area. Our problem, therefore, was to insure safety, while at the same time providing sufficient stimulation to halt the observed regression, and to begin instruction in the basic self help skills. As a result of this need a Rubella Living-Unit was established January 26, 1970 in the Greene Blind Unit.

THE STAFF AND THE CHILDREN--For the original living-unit staff, all female ward attendents, the primary qualifications were:

1. they enjoyed playing with small children
2. they thought these children were capable of learning

Of the present nine member staff, two hold a Master's Degree; one in Deaf-Blind and othe other in Peripatology. The other members have Bachelor Degrees in varying fields, English, History, Sociology, or Child Development.

Originally there were six children and five staff members with a program operation five days a week, eight hours daily. Evaluating the program at the end of March, the staff recognized signs of regression after each weekend. Therefore, additional staff (4) was added amd the program was expanded to seven days a week, twelve hours a day. At this time, there are 10 children in the project.

THE PROGRAM

The objective of the project are threefold;

1. improve the child's life style
2. help each child to reach his/her maximum potential
3. determine the teach techniques most effective with this type child

To achieve these objective emphasis focused on several areas;

1. instructing the children in daily living skills-dressing, eating, bathing, toilet training, etc.
2. exposing each child to a variety of experiences both in and out of the institution
3. improving the child's interaction with his/her peers and the living unit staff
4. evaluating from an observational standpoint the educational potential of each child

EVALUATION OF THE PROGRAM

In evaluating the first ten months of the program, we realize that the progress of the children greatly exceeds our expectations.

POSITIVE RESULTS

The positive aspect of the program and the reason for its success was the effort of a dedicated staff who taught mainly intuition and frequently under less than adequate conditions. The parents cooperated to the best of their ability.

NEGATIVE RESULTS

The greatest obstacle to the success of the program was the definite lack of a counseling service to the families of these children. Because of the complexity of the handicap and its effects upon the family supportive counseling assistance is a desperate need.

SUMMARY

In summation, the staff of the Rubella Living-Unit agrees that multiple handicapped, deaf-blind, retarded children are capable of being taught if:

1. someone believes in the child's potential
2. someone gives enough of self to the learning situation

With time, love, and a show of affection, it is possible to break through even to the most unreachable child!

50th Anniversary
Teacher Training Program
Perkins School for the Blind

By

Joseph Kohn

In looking at the Harvard Alumni Bulletin recently, I was startled to read that the Editor of The Crimson had reported "Everyone knows that the world is over." Though it has occurred before - it was then that I realized I had been gone too long from Boston and Perkins and its long-remembered places and friends. For I, for one, had not realized the world was over. Lord knows it has many problems but surely the end is still distant; tho there be early mournings.

I read the article to its close only to come on the most devastating of all realizations - the Editor of The Crimson was a girl-woman. Times had changed indeed since 1940 when I had left Watertwon and Cambridge with only occasional visits in later years. Women were attending Harvard once the citadel of profound learning and the training of leaders but for men only.

The comments by the Editor of the The Harvard Crimson brought back the story that Ewald Nyquist, the Commissioner of Education in New York State, likes to tell about the ardent young Catholic priest who was holding forth in a sermon on the glories and bliss of wedded life. He went on and on gaining in enthusiasm from his own thoughts and and rhetoric. Listening intently in his audience was a worn and grey-haired women in her sixties who hung on his every word. When the priest had finished she gathered her clothing, drew an audible sigh and was heard to mutter, "Begorra! Sure and I wish I knew as little about the subject as yon man."

And so change has come to Harvard if painfully. This is only the second year since 1949 that tuition rates have been increased. This is the year before a Harvard President steps down because student destructiveness and faculty dividedness is testing loyalties and traditions and liberty and the sheer ability of an institution to function. If these are symptomatic of the country's situation and I believe they are, we are in the midst of unique and accelerated social change and the final direction is still not clear.

Changing Character of Blindness

But what of the blind?

One of the dominant problems facing agencies for the blind today is the changing character of the blind population. Some writers, notably, Dr. Robert Scott of Princeton, have taken us to task for not spending more funds and more program time on the needs of the aging blind. I don't happen to support this thesis. Even though 50% of the blind are said to be over 60 years of age - certainly not all should be lumped as dependent or in need of service. Many are functioning quite nicely in their family settings. Where needs arise requiring specialized assistance from agencies for the blind these should be met through personal adjustment services, provision of Talking Book Machines, mobility training and so on. But elderly blind people should also have available to them from other public agenices serving any citizen those service programs such as Social Security Disability, adequate, broad scale health benefits, community services and the like just as other citizens do. These need not be administered by the specialized agency for the blind any more than hospitals serving blind people need to be so administered. Indeed, there is a strong integration benefit in older blind people participating in whatever the general community provides in the interest of such integration. This can be difficult at times but nonetheless necessary and it would, therefore, seem more realistic for the agency for the blind to adopt an advocacy or community interpretation role in behalf of blind people than to go the route of duplicating services. Certainly where no one else meets an identified need the agency or school for the blind has a residual responsibility to do so.

Finally, the characterization "aged" blind is just an artifical definition. In our State, numbers of individuals over 60 who wish to work and have the ability to do so are being placed under competitive or sheltered conditions. We consider them workers not aged. By avoiding the categorizing of people as "aged" we are probably avoiding the adverse connotations that employment people have with the term "aged" and so performing a more satisfactory job of meeting individual needs. I am sure this is equally true in other States.

The more critical problem of our day, I would suggest are the needs of blind children and adults who have multiple handicaps. Increasingly, the person coming to an agency for the blind for service is an individual with serious additional health problems or secondary handicaps which in themselves would make him eligible for service by a specialized public or private agency. If the child is to have the opportunity to grow; if the adult is to have the opportunity to be self-sufficient we must concern ourselves with this problem. Certain national tragedies such as the Rubella epidemic of 1964-65 are helping to force us to look in this direction.

For some years, we have been aware that more than half of the clients coming to our Rehabilitation Center in Newark were multi-handicapped. In our Education Program (in New Jersey, as you know, the Commision for the Blind is responsible for the school placement and education of blind and near-blind children) we have been saying that every second child coming to us was multi-handicapped. Recently, we decided to test this question.

A. We studied 100 blind children.
First, we separated out a list of all children in our Education Department who were classified as blind. Then we took every fifth (5th) one on this list until we had 100 and looked at their medical records. The findings were interesting;
(1) 55 out of the 100 had severe additional handicaps, as follows;

22 - Mental Retardation
12 - Brain damage or Neurological Impairments
8 - Cerebral Palsy
7 - Emotionally Disturbed
3 - Mongoloid
2 - Rubella Syndrome
1 - Hearing Defect

(2) Of some importance was the finding that 21 of the 100 children had more than just one (1) disability beyond blindness.

B. In addition, we evaluated 100 adults. Here we studied 100 general medical reports secured by our Vocational Rehabilitation Service and took the first 100 received after a given date.
(1) 74 out of the 100 reflected serious secondary disability or health conditions. These conditions were tabulated as follows:

Diabetes Mellitus	-	18
Hypertension	-	12
Emotional Disturbance	-	7
Cardiac Involvement	-	6
Brain Damage of Neurological	-	5
Hearing	-	4
Cerebral Palsy	-	3
Gall Bladder	-	3
Retardation	-	2

The remainder among the 74 were single cases with such problems as Emphysema, Pheumatic Fever, Cirrhosis of the liver, Gastritis, Multiple Sclerosis, Ptosis, Anemia, etc.

(2) 22 out of the 100 had more than just one disability or health problem over and above blindness. Rather frequent was the mention of Hypertension along with diabetes.

(3) 23 out of the 100 studied were over 60 years of age or over. All were being considered for Vocational Rehabilitation service.

It is quite clear that many of our so-called regular blind clients who are being rehabilitated into employment are multi-handicapped but not se seriously disabled as to be homebound or unable to work.

It is also clear that numbers of these clients through current evaluation and training techniques are being placed in employment appropriate to their ability and needs as part of a regular caseload.

While no special study was made, our experience leads to the assumption that such clients will take longer to work with, will need more physical restoration, more specialized or longer training and will be costlier on average to rehabilitate.

Rubella

The German Measles epidemic of 1964-65 and its effect on pregmant women exposed to it are becoming well known. German measles in the child or adult is a minor illness. Its effect on the fetus is devastating. In addition to hearing and vision loss, cardiac involvement, spleen and neurological impairments are common.

Various estimates of the number of children suffering hearing and vision loss as a result of the Rubella epidemic have been put forward. These have ranged from 1,000 to 5,000 or more seriously disabled blind children. For the individual States this could mean from one (1) to five (5) children per 200,000 of State population. Since fewer than 200 educational slots are said to be available for educating deaf-blind children, Federal legislation has been passed creating six (6) or more major centers for such training in the country to meet the increased need and Perkins, as many of you know, is taking a leadership role in this development.

In New Jersey we presently have registered with us some 70 Rubella children. My best estimate is that there may be as many as 200. Fourtunately, only a small number will be profoundly deaf and blind. But no one so far as I can determine has calculated how much growth damage the children with varying amounts of sight and hearing and cardiac and other systemic losses will suffer because of the combination of disabilities.

The greatest need we have is for more adequate multi-discipline evaluation units to determine the extent and depth of the child's limitations, and preschool programs conducted by selected educator specialists who can help the child to know reality and to grow since this may be denied him because of his sensory defects. If we do not start at the preschool level, we may lose these children and they will become candidates only for institutional placement. For this group of children and others born blind or born with several congenital defects we must devise ways of compensating for the experiences on which human personalities grows. If you cannot hear as a child, you do not learn speech and there is loss of social contact. If you do not see, you lose tremendous opportunities for imitation which is so necessary in the early beginnings of growth. One has to wonder as to how much retardation may derive from conbinations of sensory deprivation.

In a recent issue of the Outlook for the Blind, a group of investigators from UCLA headed by Dr. Bryant J. Cratty wrote about the "Development of Perceptual Motor Abilities in Blind Children and Adults," and pointed up this issue as follows:

"It is thus believed that three (3) basic improvements are needed in the education programs for blind children:

"(1) Early, thorough and systematic tactile training using objects of various degrees of complexity.
"(2) Systematic "body image" training affording the blind child a better concept of his body, its location relative to objects, its parts and its left-right dimensions.
"(3) And a program of mobility education starting as soon as the child begins to walk.

"It is believed that thru this three-pronged effort, more blind children will arrive at schools emotionally prepared to participate in formal programs of education and will emerge from school intellectually prepared to make meaningful contributions to themselves and to society."

If this is true for the child blind only - how much more difficult the battle for the multi-handicapped blind child. The need for preschool programs for such children is a necessity in every one of our States.

Unanswered Questions

As we look at the array of problem situations which confront us as educators, a number of issues and questions emerge which we will have to deal with in policy and practice. How we answer these will have important effects not only on agencies and schools, but also on Teacher-Training programs.

1. The Issue of Treatment. The multi-handicapped blind child by definition is more seriously damaged and may require treatment and education simultaneously or alternately. Should the education agency be responsible for both? If not, who picks up on the slack? What is the responsibility of child-caring agencies involved in the other major problems of the blind youngster?

   These questions are not only jurisdictional in nature. They raise the larger question of whether we are socially organized to serve such children. For example, if the State residential school for the blind is limited in its function to those children enrolled in the school, what happens to those severely damaged children in the State who cannot be accommodated or are not ready for formal schooling or what happens to preschoolers? Most State agencies for the blind do not have a preschool program nor one equipped to meet the varied array ofphysical and mental limitations present in the multi-handicapped blind child.

2. The Issue of Continuity. This raises a second issue and perhaps the most important one. How do we achieve a continum of service so that the total needs of the child at every age stage are considered. Fragmented service from the Department of Health or Crippled Children's programs or Children's Bureau tend to follow the legal structure of the particular agency and these are usually restrictive to very specific service areas. Agencies frequently develop their own specific populations and frequently develop their own specific populations and frequently avoid others. Except for a few places, there is not the integration and concern for the total needs of the child and this is desparately needed.

3. The Issue of Functionally Non-Seeing. If we serve the blind child with a hearing problem, what shall we say to the neurologically impaired child who cannot read? His problems are due to poor perception or poor comprehension rather than to the eye itself. Still he is just as unable to read visually as the blind or near-blind child. Consequently, questions of eligibility arise. Is this child so different from one hysterically blind and unable to read? Shall we serve him in our education centers for blind children? What are the parameters of this problem area? What specialized techniques are required? Is this perhaps a need that special education departments should deal with and not schools or agencies for the blind? And yet, in adult programs the Talking Book Service is now available to nonreaders who are physically handicapped rather than blind. This emerging problem needs sustained consideration.

Jurisdictions.

According to Federal sources, there are 39 State schools for the Blind and 10 private ones in this country. In terms of the administrative location of the State schools:

(1) 20 are in State Departments of Education.

(2) 11 are in other State departments - such as Welfare Institutions.

(3) 8 are State operated under separate Boards presumably appointed by the Governor and are relatively independent or responsible to a Board of Regents or some similar group.

It is difficult to evaluate these educational programs without precise study and this was not available but one cannot help raising the question as to whether Departments of Welfare have the knowledge and staff skill necessary for the administration of educational programs. One cannot help wonder whether the old concept of "caring" for the blind still hangs on here and there throughout the country. This is surely accentuated by the fact that even among some Special Education units of State Departments of Education, there is an amazing lack of awareness of modern educational policy and practice in educating blind children.

Perhaps it exists and I simply haven't come upon it, but it would be tremendously valuable to have a comparative evaluative study of all schools for the blind in order to gauge their current practices in depth, both in management and in operational matters. Perhaps the National Accreditation System will help in this direction. Hopefully, the well-trained educator will devote some of his time to leveling some of the valleys that exist in practice. If only by his leadership in the classroom.

For.....even if we could decide on the perfect management and organizational arrangement the educational process, for blind children as for other children, comes down to the relationship of teacher and student.

Of teachers, Pierre Villey wrote:

"To whom intuition reveals what blindness is. They know without being told that in order to oblige a blind man, they must not always act for him, but, without any affectation, help him to take as large a share as he can in the common action, so that he may have the satisfaction of doing things for others. Their attention tho vigilant does not weigh on him, so natural is it and so discreet. They guess instinctively what is difficult for the blind and what is not."

And another great voice - wrote about students as follows:

"Now as to blind children: Better a bruise or a bump than not to make their own way about. If an ordinary child falls over an object, you cry, 'Jump up and try another!' You should cry that to the blind. But no. Those dear children must learn no hard lesson through suffering. Every obstacle must be removed from their way, which must be carpeted with velvet; and they must be cautioned against danger instead of being encouraged to meet it. They are helped to do what they should learn to do alone; kept at home when they should be urged abroad; seated in the rocking chair when they should be tumbling about the house and grounds; helped and waited upon when they should be held to help and wait upon their elders; spared when they should be urged; enervated where they should be hardened; and often demoralized by the habit of receiving as gifts what they should earn by hand effort or resolutely forego."

"It frequently happens that parents refuse to send a blind child to an institution until the best years for study are passed, simply from excess of affection and anxiety for its safety. Other children may wander abroad to gather courage and strength from facing dangers and overcoming difficulties but this dear pet who has the sorest need of all to be trained to hardy self-reliance must be wrapped in flannel and kept in the rocking chair to grow up pale, and flabby and awkward and timid because 'his mother loved him not wisely but too well.'"

A rather refreshing commentary and still appropriate, though written in 1866 by someone who surely needs no introduction to this assembly, Samuel Gridley Howe.

We hope that Perkins will continue to teach teachers in the great tradition of releasing energy and creativity and not in terms of structure and confinement. We hope you will continue to teach knowledge and technique but that you will remember that the child we teach must do for himself and the knowledge we impart is that he may do so better. Though we are incubated in cocoons, we cannot remain there and survive. The blind child deprived of important and instant sensory experience available through sight needs more not less contact with his environment. To encapsulate him in excessive care is to intensify his loss.

PARIS MOBILITY PROGRAM

By

Bill Walkowiak

Over the last three years Dr. Jeanne Kenmore, Director, Europe-Northwest Africa Regional Office, American Foundation for Overseas Blind Inc. has been instrumental in the planning of three-five week Mobility courses for those persons already teaching mobility and others interested in beginning a new career. The primary purpose of these courses conducted in Paris, France, was to create an interest in mobility and the "Hoover Touch Technique". The Mobility course, funded by the Helen Keller Crusade, will be followed by an advanced course to be conducted this year. Each course took place in Saint Germain-En-Laye with some travel experience in segments of Paris.

The first two courses were conducted by Mr. Stanley Suterko, Assistant Director, Institute for Blind Rehabilitation, Western Michigan University, who was unavailable that year, because of a commitment in Australia. So in October 1970, with very capable assistants, who had been involved in previous years, I coordinated the five weeks course.

Lecturers who assisted in the course were Miss Anita Ryman, Physical Education and Mobility Teacher, Tomteboda School for the Blind, Solna Sweden, Miss Wanda Williams, Mobility Instructor, Rafsnaesskoden, Kystvejen, Kolundborg, Denmark and Mr. Jesus Jack Cabrera Mambrilla, Mobility

Instructor, Organizacion Nacio al de Ciegos, Madrid, Spain. Interpretors for this program were provided by Miss Regnier and Miss Magaloff both secretaries at A.F.O.B.

The participants in the course were from nine different countries: Mr. Ratel Abi Haidor, Lebonese Institute for the Blind, Baabdor, Lebanon, Miss Monique Bouters, Lique Braille, Brussels, Belguim, Miss Marceline Botalla, Institute Department al des Jeunes Sourds, Jeunes Oveugles & Amblyopes, Ponchin, France, Miss Greta Frank, Dalen off Skole for BlindeInnheredsvei Tnuberedsveien, Trondheim Norway, Miss Alexandra Harissiades, School for the Blind of Northern Greece, Thessaloniki, Creece, Miss Irene Pondeleaki, Agricultural and Technical School for the Blind, Sepolia-Athens Greece, Mr. Hans Erick Kiefner, Sonderschule fur Blind, Hessen Germany, Mr. Hans Carl Malthiesen, Piefsnaesskolen, Kystvejen, Kalundor, Denmark, Mr. Monton Moliner, Organizacion National de Ciegos, Barcelona Spain, Mr. Julio Domas Paiva, Centro Dr. Oliveriru Salazar Coimbra, Portugal, Miss Vebeke Transe Rasmussen Statens Institute for Blinde og. Hellerys, Denmark and Miss Maria Ribeiro, Institute Feliciano de Castilho, Lisbon, Portugal.

The course consisted of a double session daily for practical experience and a double session daily for related lectures. The practical lessons exposed the participants to a business unit including making some purchases. The Lectures were for review of the aforementioned and covered such topics as, Historical Developments, Concepts and Children, Maps and Tactual Aids, Planning a Mobility Program, Characteristics of Canes, Sounds and Hearing, Electronic Canes and Sensing Devices, etc.

The Learning atmosphere continued beyond the formal working day as the participants discussed mobility while they were learning each others language. The topic of mobility seemed such a natural subject for conversation while we dined on many new foods such as snails, ox head, etc. The wines for lunch and dinner didn't seem to impede the learning sessions, and drinking the same wine for four weeks soon became commonplace.

The results of this type of program in a European setting can only be determined in time. Dr. Kenmore and I were invited to speak to a group of volunteers and workers for the blind and and as a result of our discussion we had a travel instructor, from a French agency, observe the course. This alone gives merit to the continuation of courses of this type until some permanency is established.

The time afforded this course was not enough to permit coverage of what I feel is needed, but it does provide time for a very good introduction to Orientation and Mobility. It is my hope that as a result of this course the countries from which the participants came would organize programs to prepare teachers similar to the Midland Mobility Center in England and the program being set up in Australia.

The memories of such an experience cannot be truly revealed but fortunately I managed to capture life in over 500 ft. of movies of the program and of the Castles in the Loire region.

My sincere appreciation goes to those persons who made this trip possible especially my colleagues in the Peripatology Program at Boston College who took on more responsibilities. Some day I hope to return to France.

CONCERNING THE GOLD HANDLE OF SIR FRANCIS CAMPBELL'S CANE

By

Warren Bledsoe

Editor's Note: On July 21, 1971, the proposal suggested below by Mr. Bledsoe was unanimously endorsed by the A.A.W.B. Mobility Interest Group.

When Francis Joseph Campbell consented as an old man to become "Sir Francis", he was photographed in knee breeches, with Nelson hat and sword, all part of the conventions for investiture. But we also see in his hand a beautiful, slim, black cane with a very small gold handle. This handle, presented to Campbell by his pupils in 1886 , was entrusted to me a few years ago by a great-grandson of Sir Francis. Regrading it as a most venerable relic,

I have suggested to the Orientation and Mobility Interest Group of the American Association of Workers for the Blind that we should seek permission of the Campbell family to make it a part of the Larry Blaha Award, passing from awardee to awardee, fittingly mounted on a cane once again and inscribed. An appropriate inscription might something which an admirer or Campbell once said about his cane: "It had brains, could almost talk and ought to vote."

This eloquent tribute would be proof enough that Campbell was one of the great blind travelers on foot if we had no other. However, we also know that at the crucial point in his career, when he was seeking the backing of some of the financial magnates of Britain, he "left the committee meeting by himself and proceeded to his lodgings, first by omnibus, then by train," unaware that he was shadowed by the fabulously wealthy Duke of Westminster, a great sportsman, who said, "I'm going to put my money on that man," and did.

Appended hereto is a brief biography of Campell:

SIR FRANCIS JOSEPH CAMPBELL, LL.D. Kt. (1832-1914),
TEACHER, EDUCATOR, MUSICIAN

He was the character and personality on which modern work for the blind hinged, after Howe the undoubted champion of the capabilities of blind people, both by his own example, his demands on himself and what he asked of other blind people and society.

As a boy on a Tennessee farm when relegated to inactivity by his father, he got hold of an axe in the absence of his family, and when they returned, presented them with a stack of kindling. At the Tennessee School for the Blind, when diagnosed as lacking musical aptitude, he paid another student to give him lessons surreptitiously, eventually astonishing his teacher with his performance in piano exercises, the beginning of his distinguished career in which the teaching of music was to figure prominently. Also while at the Tennesse School for the Blind he procured the dismissal of its principal for supplying the students with pauper fare, while living off the fat of the land himself. This award is presented by the Mobility Interest Group at each National A.A.W.B. Convention to an individual who has made significant contributions to the mobility training of visually handicapped persons. Past recipients are Mr. Blaha (presented posthumously) and Dr. Richard E. Hoover. For 1971, the Award has been most deservedly bestowed upon Mr. G. William Debetaz, Vice President in charge of training at THE SEEING EYE, INC. Mr. Stanley Suterko, Assistant Director of the Blind Rehabilitation Program at Western Michigan University presented the award. The following biographical sketch was prepared and read at the Award ceremony by Mr. Suterko

G. William Debetaz, widely recognized as the world's most experienced specialist in the training of dog guides for blind persons, was born in Lausanne, Switzerland, in 1906.

He was graduated from Le College Scientifique, typical of Swiss public schools and often likened to a combination of high school and junior college, where he excelled in mathematics and engineering drawing. As required by Swiss law of all male citizens, Debetaz served three summers in the Swiss army, attaining the rank of sergeant. In June of 1929, he joined the staff of L'Oeil Qui Voit, a school for dog guide instructors established by Dorothy Harrison Eustis, an American who had already gained a reputation for her selective breeding and training program for German shepherds. In January of 1929 she had founded in American The Seeing Eye, Inc., America's first complete dog guide school.

Debetaz's promise as a dog guide instructor was quickly recognized and in November of 1929 he was transferred to Seeing Eye headquarters in New Jersey. He rose through the ranks as apprentice, instructor, supervisor and in 1948 he was elected vice president of the Training Division. In this post he succeeded Elliott S. Humphrey, noted geneteçist and animal psychologist, who had been associated with Mrs. Eustis in Switzerland.

For a brief period in 1931, Mrs. Eustis sent Mr. Debetaz to England where he trained the first dog guide and helped lay the foundation for the present Royal Guide Dogs for the Blind Association. It grew to its present service record under the late Captain Nicholas Liakoff, like Debetaz, a product of L'Oeil Qui Voit.

During his 42-year career at The Seeing Eye, Inc., Mr. Debetaz has supervised the training of 5600 dogs and close to 3600 blind men and women who have sought independence through the use of Seeing Eye dogs. The blind persons, many of whom obtain three or more dogs to see them through the longer life span of humans, live at the extensive school headquarters for one month while getting acquainted with and learning to use their dogs. During these class sessions they are in frequent contact with Mr. Debetaz, who with an inimitable Gallic alertness, is often referred to

as the "all-seeing-eye" of The Seeing Eye. More than 1200 blind men and women are currently using Seeing Eye dogs in the United States and Canada, active in Community affairs and engaged in 100 or more different vocations.

Mr. Debetaz is married to the former Lu Dahl of San Diego. He and his wife life in a restored Colonial house near Dover, N. J. Prior to 1963 they lived at the old Seeing Eye headquarters in Whippany, where Mr. Debetaz served as a member of the board of education for six years and as its president for three years. He has been a member of the Rotary Club since 1948.

Few blind men have overcome the pity of the community to the point of being threatened with lynching, but Campbell achieved this by teaching a sighted Negro to read during the turbulent period preceding the Civil War. An impassioned abolitionist, he lift Tennessee, first for Wisconsin, then for Boston where Howe's young Perkins School was flourishing. Campbell arrested Howe's attention by telling him the Perkins School was not making the blind truly independent. This led to an 11 year experiment with Campbell in full charge of a selected group of 20 children to be trained as musicians. The project was based on Campbell's theory that competence in music was related to competence in mathematics. Nineteen of the twenty subject were afterwards gainfully employed, but their employment was the beginning of a difference between Howe and Campbell.

Campbell insisted that a condition for their success was a placement program, and when Howe held this would prolong the graduate's dependence, Campbell sought the patronage of Vice President Hamlyn over Howe's head. In other ways his success and temperament had contributed to divisiveness at Perkins, and Howe resorted to giving him a leave of absence for advanced music study in Berlin. For this Campbell never returned permanently to the United States.

Stopping in Britain on the way home, he captured the imagination first of Dr. T. R. Armitage, then of the Duke of Westminster and Queen Victoria, who opened the way to the establishment of a school according to his principles and design. This became the Royal Normal College and Academy of Music for the Blind at Upper Norwood, a suburb of London. This "college" was founded with British capital and American teachers, 44 of whom crossed the Atlantic in relays, many of them generously loaned by Howe, who never lost faith in Campbell's personal capability as a teacher and galvanizer of blind youth, though he termed the Royal Normal College as "exotic", and was cool toward Campbell in his last years.

Campbell thought of the Royal Normal College as a temporary assignment to demonstrate a method of training teachers, intending after it took root to return to the United States. But it absorbed the rest of his life and in its time was the fountainhead of progress in education and rehabilitation of the blind. Its patterns of theory and practice were to recross the Atlantic in the person of Campbell's son, Charles, in the early 1900s when American work for the blind stood in need of renaissance. One of Campbell's major contributions was to assume responsibility for the employment of his graduates, 80% of whom were said to have been gainfully employed. He was also a past master at obtaining support for his program from people of standing. This he did on his own terms. One of his star pupils was Prince Alexander of Hesse, who on applying for admission was told he must give up his valet and wait on himself.

Campbell had the enduring good will of Queen Victoria's family, as well as republican minded Britains. As an old man he was reluctantly persuaded to be naturalized as a British subject, in order to be knighted. It was represented to him that this honor would crystallize his achievements as a blind person in the minds of the public as well as his colleagues. This proved to be the case. Even the most democratic minded of his contemporaries in the field of work for the blind felt pride in the redoubtable old "Sir Francis". He died with the era in which he lived in June 1914 within a few days of the assassination which predipitated World War I. An international conference of blindness, which had just been terminated in London, had engulfed him with assurance that his dynamic example had infected his fellow workers for the blind.

EVALUATION OF THE ULTRASONIC BINAURAL SENSORY AID FOR THE BLIND

By

Dr. Leslie Kay

Editor's Note: Dr. Kay has summarized his presentation to the A.A.W.B. Mobility Interest Group in Richmond, Virginia, July 19, 1971.

Introduction

The Binaural Sensory Aid (Ultrasonic Spectacles) developed at the University of Canterbury, New Zealand, is currently undergoing major evaluation trials in the U.S.A. and United Kingdom. Preliminary trials in New Zealand and Australia showed this step to be justified at this stage of the technical development.

Whilst it is inevitable that the device, in its present form, will be evaluated in conjunction with the blind user, it is actually the CONCEPT behind the device which is of greater importance. This can be very simply described as follows. Using binarual cues to indicate direction and pitch to indicate distance, a blind user may, after training, learn to perceive echo sounds produced by the device as actually coming from approximately the same spatial position as the object causing the echoes. The timbre or quality of the sound indicates the surface structor of the object. Multiple objects may be perceived, apparently simultaneously, through rapid switching of attention in conjunction with natural head movement. The device which is being tested can rightly be called an "environmental sensor", but it can of course be used to aid mobility. This is seen as its primary role at the present time. It cannot be used as a mobility aid by itself because the ground cover which it provides is quite inadequate for safe travel. When used in conjunction with the long cane, however, considerable improvement in mobility performance has been observed.

Results of Trials in New Zealand and Australia

Twenty blind persons were trained by qualified mobility teachers. One teacher was a guide dog trainer and two were graduates of the mobility programs at Boston College and the University of Western Michigan. Nine people were trained to use the sensory aid in conjunction with their guide dog and eleven used the device with the long cane. One additional person failed to reach an adequate standard of mobility and dropped out of the program.

At least half of these twenty people continue to make good use of the device even after a period of up to two years. It is thought that many of the others do too, but the information on them is inadequate.

The Current Program

Before a device of this kind can be effectively evaluated, several criteria have to be met. It must be ensured that:

1. The device performs adequately.
2. Teachers have been well trained in the fundamentals of the device.
3. Teachers have gained experience in teaching the device well.
4. Blind people have been taught to use the device as well as it is thought possible for them to do so.
5. It is known what to assess when judging mobility performance.

When each of these criteria is examined critically, none of them are being met. By the time the program nears it end, however, in mid 1972, it is thought that a good evaluation will have been conducted. Through steady feedback about the devices in the field, their performance is gradually being improved (only 250 will be manufactured for this exercise, and this does not give much opportunity to incorporate improvements now seen to be desirable). Already devices are being fed into the field which perform better than those used in New Zealand.

A training course for teachers of orientation and mobility was held at Boston College during April-May 1971. Much was learned about teaching instructors. A second course is to be held at Western Michigan University during September-October 1971. This will certainly be more effective, but it is quite evident that much thought needs to be given to teacher training. Those instructors who attended the special course in April/May have now had experience teaching a few blind people. (Eleven instructors have taught eighteen people). It is now obvious that these instructors need to teach several person each before they can be considered sufficiently experienced to judge the performance of their clients as being a realistic indicator of device value to the blind user. The value of the device to blind people can be judged from both an observation of their mobility performance and their own reaction to it. Only those people who have been well trained should be observed, which means that the first 100 persons or so should perhaps be considered only as teacher training material. But, of course, they are not. Gradually instructors are beginning to understand the potential of the device and in consequence are realizing what it is they want to see achieved with it. Some time must elapse before a clear understanding of what has to be measured can emerge.

Results to Date

It follows that this is not the time to discuss results. But they are being actively discussed. The CONCEPT seems to be acceptable to both blind people and most of the Orientation and Mobility Specialists. Some are reserving judgment until they have had more experience. Those, however, who have observed superior mobility performance are quite openly accepting the principle used in the device.

There have been technical problems, as well as administrative and teaching problems, but even so where it was planned to train thirty people by the end of August, some of which were expected to be failures, eighteen people have been successfully trained without any "drop outs".

This now means that well over fourty people have been taught to use the sensory aid, since more have also been trained in Australia and New Zealand.

General Conclusion

A better device can now be produced which will lead to improved overall performance, but even with the current state of the technology, the results seem to be very promising and justify forward planning. The evaluation, however, will not be completed before mid 1972, and premature judgments of a general nature may turn out to be over-optimistic.

THE PATHSOUNDER AND OTHER MOBILITY AND ORIENTATION AIDS

By

Vito A. Proscia

Editor's Note: Dr. Proscia presented this paper to the A.A.W.B. Mobility Interest Group in Richmond, Virginia, July 19, 1971.

PATHSOUNDER

My purpose in this paper is to report on the developments, findings, and activities of experimenting with the PATHSOUNDER, an ultrasonic, electronic, mobility aid and to stimulate dialogue on some of the problems we have either overlooked, or not emphasized enough, in the area of mobility and orientation for the blind. Many of you have seen or perhaps have worked with PATHSOUNDER. However, for those who are not familiar with the device I believe a short description is in order.

PATHSOUNDER is an ultrasonic mobility device for the blind which is worn on the chest and held there by a neck strap. Its function can be described simply by saying that it is an above the waistline object detector which is used as a supplement to the long cane. Briefly, it protects the user from head and chest collisions and will detect objects which are quite small in size.. The beam emitted by the device can be described as a compressed, cone shaped beam, where the apex of the cone is at the instrument, and the opening portion of the cone is at the maximum range. The maximum range of the device is six feet. The cone is approximately the width of the shoulders, and extends from the waistline to slightly above the forehead. When a target is detected at maximum range a pulsating buzzing sound is heard from the tiny speakers which are mounted on the neck strap and lie just below the earlobes. When the user approaches the detected object, the buzzing sound changes abruptly to a pulsating beeping shound (a change in frequency) at a range of 30 inches from the instrument. PATHSOUNDER remains quiet when no targets appear in its detection range. One can say that PATHSOUNDER remains quiet a great deal of the time.

In June of 1968, the Center hired two mobility and orientation instructors to train and work with subjects using PATHSOUNDER techniques. The instruction consisted of approximately 5-10 hours of indoor drills to familiarize the subjects with PATHSOUNDER methods. After satisfactory familiarization was accomplished, the subject were taken on the street for further conditioning and training in degrees of crowded environments. The supreme test was to measure the time it took a subject to traverse a congested pedestrian route in Boston, known as the Filene's

block, using PATHSOUNDER and comparing this time in the same route without the aid of PATHSOUNDER. All subjects used in this evaluation were considered to be experienced and well trained travelers in the long cane technique. A second comparison was made traveling the same Filene's block area to count the number of contacts or simple collisions made by the subjects when using a PATHSOUNDER and traveling without PATHSOUNDER.

The data collected indicated that the number of collisions or contacts with pedestrians were considerably reduced when using PATHSOUNDER as a supplement to the cane. This data was later verified by a recent study conducted under the direction of Mr. Bruce Blasch and one of his students, Mr. Edward Smith, at Pittsburgh University.

In the past three years, PATHSOUNDERS have been distributed to several agencies either on a loan basis from Sensory Aids Evaluation and Development Center, or have been purchased directly. Presently, PATHSOUNDERS are located at:

The New York Association for the Blind
The Jewish Guild for the Blind in New York
Pittsburgh University
Greater Pittsburgh Guild for the Blind, and
West Haven V. A. Hospital

In addition, the V. A. has purchased five PATHSOUNDERS in order to conduct evaluation and experimental programs at the V. A. Hospitals. As one can readily note, there are relatively few PATHSOUNDERS in the field which are being evaluated and which create difficulties in collecting pertinent data.

One of the most interesting experimental programs which was conducted with PATHSOUNDERS was undertaken by the Hines V. A. Hospital. It was there that a very satisfactory use was found for the device as an electronic mobility aid to be used with wheelchair confined blind. Mobility experiments were conducted with a double leg amputee to determine whether or not PATHSOUNCER would allow the patient to travel freely in the hospital complex. It was found that PATHSOUNDER could be used to aid patients to ambulate freely through the corridors and hallways of the hospital environment. The V.A. has stimulated other agencies to examine and evaluate PATHSOUNDER as a mobility aid for specialized mobility problems.

TAC-COM PATHSOUNDERS

An interesting system which has been developed at the MIT Sensory Aids Evaluation and Development Center is TAC-COM. TAC-COM is a tactile communication system which has been developed to communicate or signal to the deaf-blind. It consists of a sender and a pocket receiver. When the sender emits a signal, the receiver vibrates vigorously. Presently, the TAC-COM system is being evaluated as a fire alarm warning device and doorbell signalling device in a National Center for The Deaf-Blind and a Deaf-Blind private dwelling. A brief but unique experiment has been conducted with the PATHSOUNDER to substitute the auditory cue (buzzing and beeping) by the TAC-COM vibro-tactile display. The PATHSOUNDER was modified to include a TAC-COM sender and is worn in the normal sense on the chest and held there by the neck strap. When the PATHSOUNDER detects a target it activiates the sender which emits a signal and causes the receiver to vibrate in the users pocket. The tactile display corresponds to the six foot range of the auditory display (buzzing) for PATHSOUNDER. No differences are discernable between six feet and 30 inch range distances.

It may be difficult to allow the deaf-blind to travel independently, in fact, I would hesitate to make this recommendation, but the TAC-COM PATHSOUNDER could be used as a training device for the deaf-blind in confined mobility situations, for example, veering is a pronounced problem with the deaf-blind and the TAC-COM PATHSOUNDER can be used as a direct and instantaneous feedback device to warn the user of veering. If the appropriate training facility were set up other experiments in the mobility of the deaf-blind could be investigated. It is also felt that the TAC-COM PATHSOUNDER can be useful to aid the mobility of the blind in noisy environments and also the hard of hearing blind.

TACTILE DISPLAYS OR RELIEF MAPS

I would like to discuss or at least bring to your attention a topic related to mobility of the blind which has not received as much attention compared with instruction of electronic aids and cane techniques, and the development of these tools. Technologists and instructors have provided the blind with tools and instructional techniques to allow the blind to ambulate in their environment. However, very little work has been done to prepare or equip the blind with information of his environment. The area I am specifically concerned with is the technology of producing and replicating mobility and orientation maps for the blind.

An innovative technological process has been brought to my attention by a private investigator which may be useful in presenting tactual material to the blind to provide him with sufficient mobility and orientation data of his environment. The present problem which is hampering the advances that may be made in developing tactile maps for mobility and orientation purposes is a selection of symbols which can be stadardized to represent mobility routes, paths, and cues. A tactile symbolic language has not been developed and there are no standards which exist that will help the technologist or investigator in solving the problem of producing tactile information. Therefore, independent steps are presently being considered to explore a meaningful symbolic language which will convey the necessary information. I feel that it is insufficent to provide or to train the blind with ambulatory aids alone, such as canes, dogs, electronic devices, and even the elbow of guides. Instead, what is really needed is a process of training and instruction with aids and devices combined with a method of quickly familiarizing the individual with information of his environment, in order that he may travel comfortably, inconspicuously, and safely. I feel it is essential that a traveller should have at least a mental image or picture of his environment in order to properly utilize the tools with which he is equipped. I feel that appropriately designed tactile maps or images, perhaps even including verbal instructions or descriptions, is an excellent way to provide the blind traveller with environmental information which will enhance his mobility.

In closing I would like to inform you of some current developments in aids which have been marketed as mobility and orientation devices for the blind. Silva has developed and is offering for sale a powerful compass which is the size of a braille pocket watch and will have a great deal of utility for orienting the blind in environments suitable for compasses. A recently established corporation known as Sensory Aids Corp. has production engineered a sound source football for the blind known as the AUD-A-BALL, and is offering the ball for sale to agencies and centers for the blind. MIT has long since established the usefulness of sound source balls which can be used as training devices and at play for blind children and adults. A great deal of original effort and investigation has been done through student theses activities on sound source balls for the blind in the Mechanical Engineering Dept. of M.I.T.

I do not want to leave you with the impression that tactile maps, electronic mobility devices or other aids can individually solve the mobility problems of the blind, but instead, I mean to convey that the mobility and orientation problem is a complex one and that no unique solution exists to overcome it. Tactile displays will help, mobility devices will help, and training for all ages at any level of sophistication is most important.

THE V. A. - BIONIC LASER CANE

By

Eugene F. Murphy, Ph.D.

Editor's Note: Dr. Murphy delivered this paper to the Mobility Interest Group of the American Association of Workers for the Blind, Richmond, Virginia, July 19, 1971.

The VA-Bionic Laser Cane for the Blind is currently available in ten copies which are about to be given a preliminary evaluation at Hines and Palo Alto VA Hospitals. Five weeks of training and tests of eight selected blinded veterans will be followed by approximately nine months of hometown comparative use of the laser and the conventional canes by these veterans. The evaluation plan has been developed with advice of a panel under the chairmanship of Dr. Patrick Nye of the Subcommittee on Sensory Aids of the National Research Council. The laser cane is only one of a number of attempts to improve the mobility of the blind which have been developed, evaluated, or both under the sponsorship of the Veterans Administration.

The laser cane represents the culmination of an interest for more than two decades in problems of mobility for the blind on the part of the Veterans Administration. This work has been summarized in an article by Benjamin (1) and details have been reported in Bionic Instruments progress reports (2,3), companion reports by Tracor (4) on the evaluation of an earlier Bionic device, and related papers by Reilly et al. (5) on the evaluation of early models of the Kay Ultrasonic Torch.

During World War II the wartime Office of Scientific Research and Development stimulated creation of the National Research Council's Committe on Sensory Devices, later supported by the

Veterans Administration. As a part of its efforts on mobility, there were three attempts at ultrasonic object detectors under Brush Development, Hoover, and Stromberg-Carlson. Likewise the Army supported the development of the Signal Corps mobility aid designed by Lawrence Cranberg using optical triangulation by using visible light. All of these received some preliminary trials at Haskins Laboratories (6).

About 1950 and following a production-engineered model of the Army Signal Corps device, built by RCA, was tested in multiple copies by Prof. Thomas A. Benham of Haverford College, in a field trial involving ultimately about 60 people (7). This aid appeared to be useful for the detection of objects and obstacles straight ahead. If it were tilted downward, it could measure the slant height to the ground and thus detect curbs by the sudden increase in the distance to the ground. There were difficulties, however, because of the vertical oscillation of the body of the user during walking, the swinging of his arms, and the distraction caused by a constant signal which changed rhythmically during walking and yet whose sudden change was supposed to detect a curb. Many blind users objected to the constant presence of the signal. Professor Benham, in a paper presented at the 1953 annual convention of the American Assocation for the Advancement of Science (8), summarized the results of the evaluation and gave recommendations for improved models.

The Veterans Administration then embarked in a long period of development to try to achieve these goals. Work was done first under a VA contract with Haverford College which in turn used the then Bio-physical Instruments, later organized as Biophysical Electronics and as Bionic Instruments, as a sub-contractor. Later a direct contract was made with Bionic Instruments. Out of this project eventually arose the Bionic Instruments G-5 object detector, somewhat like a lunchbox. Though it made no pretense to step-down detection, it appeared quite reliable at detecting objects ahead of the user when carried at his side. This device used flashes of light from an EG&G flashlamp to perform detection of obstacles by optical triangulation, a principle which after much study by Bionic Instruments seems to remain the most versatile method.

The G-5 device was evaluated in ten copies by Tracor of Austin, Texas, with the cooperation of Professor Worchel of the University of Texas, a psychologist long interested in mobility problems of the blind (9). It became apparent that subjects were happy to be able to explore and identify objects beyond arm's length. This new ability tended to enrich their knowledge of environment. Some congenitally blind subjects were particularly fascinated to discover, for example, that chandeliers hung downward from the ceiling which they had always presumed was flat and featureless. Though this richer appreciation tended to slow their passage through an obstacle course or a busy street, nevertheless a retest of available subjects showed that, if urged to do so, they could move rapidly. By merely looking for openings without identification of the bordering obstacles, they could go through obstacle courses with the same speed and with no more errors than with the conventional cane or guide dog. Indeed, those subjects who claimed to travel unaided (but probably actually used the elbow of a sighted friend a good deal of the time) were able to go through the obstacle course with dramatically fewer errors than in a completely unaided condition.

Shortly afterward the gallium arsenide light emitters, about the size of a transistor case, became available. They were immediately used by Bionic Instruments to develop a flashlight-shaped object detector. Without a ranging feature, this was merely intended for limited local protection during travel on level and familiar ground while serving as a test vehicle for development of circuitry. Still later, in 1966, true gallium arsenide lasers operating at room temperature became available and were promptly used by Bionic to build a series of devices in cane configuration with three optical triangulation systems, culminating in the C-4 cane currently being tested. The goal was to keep the proven value of the long cane while supplementing the shortcomings.

THE C-4 CANE

In the C-4 cane, one of the laser beams of invisible infrared light shines upward so that its companion photocell, "looking" upward from a lower point on the cane shaft, can detect reflections from overhead obstacles which would otherwise strike the chest, head, or shoulders of the cane user. Protection is thus afforded against objects above the cane handle which normally can only be detected by echo location if the cane is used in the orthodox fashion with its tip on the ground. A second beam and its associated photocell project their detection area forward to give distant early warning of obstacles out to about 12', equivalent to an impracticably long mechanical cane and useful both to identify distant landmarks while crossing a street or parking lot and also to detect pedestrians or window shoppers without mechanically rapping (thier) shins. The third beam points forward and downward to identify major discontinuities in the terrain such as the edge of a subway platform, a descending flight of stairs, or other major dropoffs. As yet, it is <u>not</u> sufficiently sensitive to detect ordinary small curbs, which still must be located by loss of

mechanical contact in conventional long cane technique. It is hypothesized, however, that some blind users will be able to walk more confidently and in a more relaxed fashion if they have some assurance of warning against major hazards.

The Bionic Instruments designers assumed that the middle or forward looking beam would give the most frequent signals, so they provided a tactile stimulation consisting of a pin vibrating against the index finger of the hand holding the cane. This nonaudible signal normally would be detected only by the user. The other two signals typically occur much less frequently and are given by an audible tone from a small loudspeaker in the end of the crook in the cane handle. Overhead obstacles are signaled by a high-pitched tone, while major dropoffs are indicated by a low-pitched tone. Recently, the evaluating team has suggested that an intermediate tone might be desirable instead of or as a supplement to the tactile stimulation, so Bionic Instruments has modified the canes currently being tested to allow direct comparison of the usefulness of tactile and audible signals. Preliminary experience indicates that availability of both tactile and auditory signals is needed, e.g., noisy vs quiet locations, fingers numbed by cold or by gloves, etc.

The canes had already been modified so that the signals being given to the user by the three channels could be presented through a telemetering system (carried by the user and plugged into the same jack used for recharging the nickel cadmium batteries) conveyed to a small FM radio carried by a mobility instructor observing from a distance. It is thus possible, for example, to detect the first point at which the signal is presented and thus to measure the reaction time and the distance travelled by the subject before he stops or otherwise shows that he has detected a hazard.

UNEXPECTED PROTECTION VS. "FALSE ALARMS"

It should be noted that a photocell responds in the same way, giving its characteristic output signal, whenever it detects laser light within its field of view and during the time it is "turned on" or "gated" to match the brief pulse of laser light. There are possibilities, as shown by a detailed study of the geometry of the beams and fields of view of another cell than the one with which that laser normally cooperates. Thus certain nearby objects may be detected if one is aware of the subtleties of the system, yet the inexperienced or untrained user may initially be bewildered by apparent false alarms. Advanced training in these possibilities should of course follow the conventional training in which the beams are stimulated in their normal functions. An instructor fully understanding these possibilities will realize that they provide useful information, not false alarms.

LASER SAFETY

The concept of a laser, of course, immediately causes concern about safety aspects. There has been so much discussion of high-powered lasers for the cutting of metals and the welding of retinas for retinal detachment that the general public is concerned about laser safety. There are increasing number of attempts to develop codes and legal regulations. Bionic Instruments has duly registered as a laser device manufacturer in the state of Pennsylvania. The author has attended the Second International Laser Safety Conference at the University of Cincinnati in 1969 and the Conference on Safety of Lasers, Microwaves, and Ultraviolet Radiation, also conducted by the University of Cincinnati, in 1971. He has talked with a great variety of experts in government, universities, research institutions, and industry. The consensus has been overwhelmingly reassuring. The laser and drive circuit used by Bionic have been tested by the Air Force (10) and complete laser canes have been tested by two units of the Army as well as by the University of Cincinnati Laser Laboratory (11) with the cooperation of the Medical College of Virginia. The testing program has included both physical measurements of strength and divergence of the beamand prolonged exposure in monkey eyes. No damage has been found in the biological tests. The physical tests typically indicate intensities slightly above a threshold which has been found with other, far more powerful and more "coherent" lasers of different types. A testing program has also been carried out by the United States Public Health Service on an actual laser cane, but the formal report is not yet available. Informal discussions with those conducting all these tests indicate no cause for alarm with the VA-Bionic laser cane.

EVALUATION

As a first step toward evaluation it seemed desirable to gain the opinions of skilled mobility therapists. The next step was to develop new teaching techniques based upon modifications of conventional long cane therapy. Then the goal is to have selected blind person with above-average mobility skills receive special training and experiment with the cane. It is recognized that there are so many variables in the field that one cannot expect to have a really good evaluation with only 10 C-r canes. On the other hand, there is the dilemma that one does not wish to

build large numbers of additional copies if the present cane should seem hopeless or if obvious improvements could be made based upon a limited evaluation. An early model cane, C-3, was shown relatively briefly in periods of a few hours to a few days to about 50 mobility experts in the New York, Boston, and Chicago areas. Beneficial suggestions received from this exposure were included during the design of the C-4 cane. The C-4 cane was then presented for periods of weeks or months at a time to the staffs at Hines and Palo Alto VA Hospitals for preliminary trials by one mobility therapist functioning under a blindfold with supervision and instruction from a second mobility therapist. Because at that time the laser safety aspect seemed somewhat uncertain, the cane was used initially only on VA property.

With increasing confidence in all aspects of the cane, its use was gradually extended. Blind staff members were allowed to take the cane out on the adjoining streets for prolonged use in daily life. In addition, mobility therapists at other non-VA institutions were allowed to use the cane for periods of weeks or months with the goal of gaining greater population. This included blind children at the Missouri School for the Blind and civilian blind individuals in other settings including Seeing Eye. Canes were loaned to the Western Michigan University, California State College, Los Angeles, and Florida programs for teaching mobility instructors.

To combine the insights gathered by the various mobility instructors during the preliminary use under a variety of circumstances, a meeting was convened at Hines VA Hospital in September 1970 under the auspices of the Subcommittee on Sensory Aids, Committee on Prosthetics Research and Development, National Research Council (12). There was general consensus that the forward-looking or middle beam was particularly valuable, although there was a somewhat variable opinion on the merits of the other two beams. There was some feeling that the upward looking beam should be tilted forward to indicate targets about 2' ahead of the tip of the cane when held at the "usual" 45° angle (which mobility experts had suggested as the design condition) rather than directly over the tip of the cane as had been requested based on earlier experience. Based upon the recommendations of the September 1970 meeting, small changes were made in the existing ten canes, and they were thoroughly checked over at the development laboratory. Five apiece were then distributed to Hines and Palo Alto VA Hospitals, with the concept of supplying four veterans at each center and keeping one cane as a spare.

As noted earlier, a protocol (13) for preliminary evaluation was developed by an NRC panel consisting of both engineers and experienced mobility therapists. The plan calls for recruitment at each center of eligible veterans with better-than-average mobility skills, intensive evaluation of ability with conventional long cane techniques, training with the laser cane, and then evaluation on both obstacle courses and city routes of increasing traffic density during the month of August, 1971. The performance of each subject will be recorded with motion picture or video tape equipment. Each veteran will then take his cane home for continued routine use with follow-up by telephone contacts and visits by two mobility therapists. In a step relatively unusual in evaluation of prosthetic devices, each subject will later by asked to return to use of the conventional long cane for a period of weeks, then to make a comparison. It is hoped that the experience with the existing laser canes will contribute both numerical data and clinical impressions which will be useful in the development, prescription, and training programs for mobility devices in general.

One of the most important features of the evaluation is the development of prescription criteria. It is not enough to say that the cane is accepted or rejected by certain percentages of users. Rather it is necessary to discover the types of users for whom it is most appropriate. Long experience with prosthetic and sensory aids has shown that there is no single panacea suitable for all users. Instead, different types of devices may be useful for different individuals or even for the same individuals under different circumstances. Thus one needs an armamentarium of devices from which selection can be made. Appropriate interdisciplinary clinic teams such as Visual Impairment Service Teams may then be used to help the patient in the proper prescription of devices, in training, and in checking out his performance with the new device.

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REPORT ON LOW VISION AND MOBILITY

By

Loyal E. Apple

Editor's Note: Mr. Apple and his wife Marianne delivered a presentation on the subject of mobility training for persons with low vision to the A.A.W.B. Mobility Interest Group in Richmond, Virginia, July 20, 1971.

Low Vision is the greatest single unmet need in the field of Orientation and Mobility today. Those involved in Orientation and Mobility Services do not have answers on low vision. Yet sixty to seventy per cent of their case load is composed of persons who are legally blind, but have useful vision. We generally underestimate the potential of the sensory asset which is the most important to them, their vision, limited as it may be. Until we develop some understanding of the visual phenomenon experienced by low vision persons daily, some techniques for evaluating their visual performance, and the ability to train their visual habits, we communicate only our lack of understanding to these people. This does not improve their own self-understanding or adjustment.

My conclusion, and that of many people in the field, is that ophthalomologists and optometrists do not now, and probably will never provide the techniques and measures which will be eminently

satisfactory to mobility specialists in dealing with low vision problems. They are clinically oriented, surgically oriented and magnification oriented. They are functionally oriented for near vision. They are not functionally oriented for work tasks, nore for distance vision tasks such as mobility. They do not and will not have the answers for you on functional vision evaluation or distance vision training.

This is a report on the Low Vision Conference, and the mobility functional vision evaluation of the Western Blind Rehabilitation Center, VA Hospital, Palo Alto.

LOW VISION CONFERENCE

The Low Vision Conference, sponsored by the U. S. Office of Education was held in San Francisco November 29 through December 1. The Office of Education sponsored 15 low vision conferences during 1970, of which ours was the only one, so far as we know, which dealt with mobiliy problems. The other conferences dealt with near vision. There were several disciplines represented at the conference: Orientation and Mobility, Perceptual Psychology, Sociology, Social Work, Optometry, Education and Ophthalmology. The goals of the conference were:

1. To assemble information which would lead to the development of methods for improving visual performance, including distance vision, and adjustment of persons with severe visual impairment.

2. To develop research goals, and to stimulate research interest in the unique aspect of human adjustment to this type of disability.

3. To publish the above for the use of professionals dealing with children and adults with low vision.

4. Although it was not an immediate aim of the conference, there was an ancillary goal for a new discipline, "Low Vision Specialist" or a modication of known disciplines, such as mobility, to include this aspect.

The folloing are some samples of content from some of the speakers:

David L. Knox, M.D., Associate Professor, Johns Hopkins University School of Medicine, responded to the need of Orientation and Mobility people for information on the types of environmental visability cues the low vision person could be expected to utilize.

"We are not developing at this point techniques for testing contrasts, shadow of objects or objects which have a light side or a dark side which are clues in recognition of them as objects. Detection of movement is something for which we have not developed standardized testing situations. Another problem is glare. When it's a very bright day you do have shadows which provide contrast and therefore give the patient clues that there are things there that need to be appreciated, particularly in mobility training. Glare may exhaust the whole retinal function."

Charles B. Margach, O.D., Pacific University, College of Optometry, Forest Grove, Oregon, commented on the utilization of telescopic lenses in mobility training.

"'If you are not legally blind, use a low vision aid and you will be.' The effect of ophthalmic telescopes and microscopes (especially the former) on the visual field of the user is catastrophic insofar as travel, while wearing the aids as spectacles, is concerned."

Richard E. Hoover, M.D., Baltimore, Md., Consultant to the National Eye Institute, Bethesda, Md., directed the attention of Ophthalmology toward some of the effects of eye conditions on mobility.

"There is unanimity of agreement that characteristics of eye conditions do have a direct and important bearing on visual function of persons with severe visual impairment and that this effect cannot be adequately or accurately predicted from a report of visual acuity alone as usually reported.

"A conglomerate list suggested from all groups and listed in random order which practitioners have proposed as important for performing by visual means are: visual acuity accurately measured under standard conditions at levels of lesser and greater illuminiation, etc; pain; light and dark adaptation; fixation and fixation patterns; ability to judge depth; accommodation; color awareness; fields, both objective and subjective, including character and density; possiblity of damage from use of physical activity; other characteristics of a larger syndrome such as diabetes, multiple sclerosis, rubella, and what not."

Newell C. Kephart, Director, Glen Haven Achievement Center, Fort Collins, Colorado, summarized the basic nature of the rehabilitation process.

"I think we tend to agree that what we do in the area of visual training or of perceptual training is not to alter the basic sensory data. I don't think we improve the visual input. I think what we do is to teach the individual to take a minimum of visual data and parlay it into a maximum of useable information. I believe we were in considerable agreement that this is the nature of perceptual training and also the purpose of perceptual training.

"Rehabilitation in this area moves from the category of a luxury to the category of a necessity. If the effect of low vision is only subtraction, rehabilitation can be a luxury. It's a nice thing to have. The patient walks down the hall with greater confidence and he looks better and so on and this is all nice. But if the effect of low vision is to confuse other modalities, to confuse the processing data, then rehabilitation becomes a necessity because this confusion is interfering with the individual's total adjustment to his environment."

FUNCTIONAL VISION EVALUATION

I will direct my remarks now to the mobility functional vision evaluation program of the Western Blind Rehabilitation Center. We began working on this type of program during the fall of 1969 based on the following operational needs:

1. To have measures of vision, as it relates to visual proficiency, other than acuity and fields.

2. To have some means of communicating between instructors when more than one person works with the same student.

3. To have a series of experiences for the student which will allow him to appraise his own visual performance and to receive feed-back on the characteristics of his visual performance.

The evaluation progress from static indoor environments to the more complex residential and business travel environments. The total work-up may take from one to two weeks depending on the student. The standardized evaluations are Recreation Room, Dining Room, Parking Lot Test, Residential Area, and Business Area.

The system which has been used for about eight months was designed by Donald C. Cooper and Matthew S. Angus, Orientation and Mobility Specialists. The parking lot test was initially developed by James L. Doyle, Assistant Chief, Western Blind Rehabilitation Center. As the facilities can be developed, we will evolve more standardized procedures. At the present time, we have partial records on 19 men and standardized evaluations on 33 men.

Each low vision student goes through the functional vision evaluation. For the benefit of instructional quality and student adjustment such functional vision exercises should be accompanied by a subjective phenomenon and field examination and extended work in near vision. The subjective examination includes routine collection and interpretation on subjective perception of field loss, photophobia, phophenes, fading of vision, fluctuation, distortions of space or movement, and the effects of drugs.

DISCUSSION

I used to like to predict the way in which the field, or events in the field, would go. I no long do that sort of thing, because I feel that each of us has some responsiblity for making it go in the direction we think it should. With respect to low vision we at Palo Alto VA Hospital intend to do the following:

1. To move, through conferences and clinic work, toward functional evaluation procedures of general utility. Anyone could do something similar to the things we have done is his own area. We need standardized procedures which are accurate and meet as many of the following criteria as possible: quick, simple, requiring a minimum of training, applicable in selected outdoor environments and provide feedback experience to the low vision student.

2. The mobility specialist trying to work in this area is assailed with many doubts regarding the proper approach to be used with low vision cases. All too frequently, they use that which they know best: modifications of the techniques used with the totally blind. We need some new concept of how Orientation and Mobility might be practiced with these persons; something which will free our minds to make new approaches. We have developed and are publishing such a new concept for low vision training in mobility. It is Distance Vision and Perceptual Training: A Concept for Use in the Mobility Training of Low Vision Clients, by Loyal E. Apple and Marianne May Apple published by the American Foundation for the Blind, 1971.

3. In order to stimulate interest in this subject within the university programs training mobility specialists we are beginning a periodical called "Low Vision Abstracts". It will be published three times per year. It will contain at least one full-length article on low vision, abstracts of papers written by students in the university programs and articles relating to distance vision, topics for research or study by students in university programs, and current bibliography. Mailing will be restricted to the universities and the students whose abstracts are published. Persons already in the field who are writing on low vision can have their papers abstracted, or published, and thereby be placed on the mailing list.

SUMMARY

We have had one conference on the uses of distance vision. We need several more, principally of Orientation and Mobility Specialists, to discuss functional vision evaluation and vision training.

We have seen limited efforts to develop subjective field examinations and mobility functional vision evaluations. We need further development and standardization.

Some literature, bibliographies and periodicals dealing with low vision as it relates to mobility are beginning to appear. These may serve as focal points for the development of knowledge in this field.

There appears to be a wide-spread and genuine interest among Orientation and Mobility Specialists in meeting the needs of their low vision students to make effective and respectable use of their sensory systems, including vision, in their adjustment and skill development. It is hoped that this interest will carry them through the jungle of tangled perspectives which we now find in low vision.

Orientation and Mobility Specialists do not like to fail. If you work in low vision, you will have failure while you are learning. Your feelings of frustration and helplessness are nothing in comparison to the feelings of the low vision person. At the present time he does not feel that you understand, appreciate, or respect the struggle which he goes through daily in trying to utilize limited vision in a world composed of either sighted or blind persons.

HOW TO DEAL WITH BLINDISMS

By

Lowell Holland

Editor's Note: This paper was presented to Interest Group II (Rehabilitation and Employment Services), American Association of Workers for the Blind National Convention, Richmond, Virginia, July 19, 1971. Because of its direct application to the field of Orientation and Mobility, Mr. Holland was invited to include it in this newsletter.

"Blindisms" is the term which is commonly used in reference to the habits, tics, or mannerisms exhibited by some blind persons that are directly or indirectly the result of blindness or which call undue attention of sighted people to the individual's blindness. This undue focus of attention on the blind person's handicap often interferes with normal social interaction and gives the sighted person an exaggerated, and often erroneous, impression of blindness. Thus, blindisms present a barrier to normal social intercourse and increase the handicapping effects of blindness. For this reason, we in the field of rehabilitation have an obligation to blind persons we serve to help them correct, or avoid developing, blindisms which are a social handicap beyond the blindness itself.

"How to Deal with Blindisms" is a subject which has received much attention, but relatively few solutions, especially in blind adults who have manifest blindisms since the formative years. The best time to deal with blindisms, of course, whether in the child or the adult, is when they are first noticed and before they become deeply entrenched habit patterns. Prevention is always an easier and more successful course than correction. In working with blind adults, we find ourselves more frequently confronted with the problems of correcting blindisms which have existed for many years. However, prevention of blindisms is also an important aspect of rehabilitation in the

recently blinded adult. Since my experience in working with the blind has been entirely with adults, first as a rehabilitation counselor and now as part of a rehabilitation center team, I will confine this discussion to the practical consideration and techniques for dealing with blindisms in the adult years.

Before initiating any efforts to correct blindisms, it is first important that an evaluation be made to identify the factors which have contributed to the individual's development of blindisms and the meaning which they have to him. For purposes of discussion, blindisms can be divided into five different categories based on factors which have contributed to their development or the particular gratification which the individual receives from them.

1. Overt expressions of internal conflicts or insecurities.

Blindisms of this type may range from external manifestations of anxiety and tension to the ritualistic behavior of the obsessive-compulsive personality or the withdrawal reactions of the schizophrenic.

Psychiatric consultation is very important to the rehabilitation team in approaching blindisms of this type. In some cases, the blindisms may be symptoms of more deep seated emotional problems which need psychiatric attention. Efforts to correct the symptoms may aggravate the real problem. In some cases, treatment of the emotional problem may reduce or eliminate the external symptoms. When the mannerisms are found to be merely expressions of normal anxiety, they may disappear as the client progresses toward rehabilitation, or they may be dealt with through direct confrontation.

2. Accommodations of the organism to the environment.

In many respects, loss of vision interferes with an individual's ability to function in a normal manner. There is a natural tendency for the organism to make adaptations to the demands of his environment. The blind or partially sighted individual may develop manners of performance which make functioning easier for him, but they may appear peculiar to sighted persons observing his performance. The partially sighted person may have to get abnormally close to an object in order to see it, or he may have to hold his head in an awkward position to make the best use of his vision. The blind person who has not learned to depend on a cane for protection and mobility might develop a slow, shuffling gait to protect himself against unexpected obstacles or steps. He may turn one foot outward to better feel the edge of sidewalks without stepping off or turning his ankle. The extra tall blind person may develop the habit of walking with his head down or his body slumped to avoid overhead objects which he could frequently encounter. He may walk backward when anticipating some object ahead since head-on collisions are usually more painful than posterior contact. The partially sighted person may refuse to wear opaque glasses to cover unsightly eyes because they would reduce the usefulness of his vision.

Blindisms of this type may often be corrected through development of alternate techniques which are more socially acceptable. Efficient cane technique and confidence in the protection which it provides may reduce the need for a shuffling gait or other protective mannerisms. Frequently however, corrective exercise and reconditioning may be necessary to change long term habit patterns. In some instances, prolonged misue of a body member may have resulted in some deformity or impairment requiring corrective surgery. An example is an out-turned foot which may have to be straightened surgically. It may sometimes be necessary for the partially sighted person to sacrifice some useful vision through wearing tinted glasses to cover unsightly eyes in order to present a more socially acceptable appearance. Orthopedic consultation and physical therapy services should be utilized in correcting blindisms of this type.

3. Mannerisms resulting from the blind person's lack of awareness of his own appearance or limited understanding of the types of behavior which are considered acceptable or unacceptable by sighted persons. Blindisms of this type are more commonly seen in congenitally blind persons who may have failed to gain full awareness of their own body image and through their inability to observe the overt behavior of others have failed to learn normal mannerisms through imitation. During the formative years, the blind person is deprived of the ability to view himself in a mirror and watch the actions of others, both of which play an important part in the development of body awareness. While the adventitiously blinded person is usually better able to visualize his own appearance, he may also develop mannerisms of this type due to his inability to monitor his own appearnce through a mirror and his inability to visually observe the reactions of others to his appearance.

Some examples of blindisms in this category may include such things as rigid or improper posture, failure to look toward people when talking to them, fingering of eyes or other parts of the body, unnatural walking gait, awkward positions of head or hands, failure to swing arms in walking, and failure to show appropriate facial expressions. Blindisms of this type in the recently blinded adult can usually be corrected in the early stages by merely reminding him each time an inappropriate mannerism is observed. It is important that such reminders be given in an

understanding and non-critical manner by an individual, or various rehabilitation team members, in whom the client has confidence. A professional person outside his own family may be able to more effectively help the blind person in correcting these blindisms. If blindisms develop from the fact that the blind person is never visually reminded of the normal gestures, mannerisms, and other responses of sighted people and cannot see his own, it is necessary that someone make him aware that he is failing to do things that he once did or acquiring new mannerisims or tics, or appearing awkward to others. When a congenitally blind person has blindness of this type, correcting them is usually a much more difficult and complicated problem. An intensive, long term program in a structured setting is usually necessary for any degree of success. It is necessary to start with helping the client increase his awareness of his own body structure and movements. Certain prescribed body exercises, movements, and opportunities to feel the body structure and movements of others or models of the human body are often helpful in developing body awareness. Much individual instruction and attention are necessary to help the client learn appropriate manners of response. Opportunities must be given for him to practice these responses with constructive criticism until they become an integral part of the individual's natural response patterns rather than always requiring conscious effort on his part.

4. Childhood fixations

Some mannerisms which are considered normal behavior at certain stages of early development in the child may become fixed and continue into the adult years. The blind child who is deprived of opportunities to develop normal gratifying experiences at a certain stage of development may tend to continue gratifying behavior which he enjoyed during earlier stages. If prolonged excessively, these behaviors may become entrenched habit patterns which he cannot overcome due to the gratification which he continues to receive. Some blindisms of this type may include a rocking motion of the body which is often seen in the normal development of small children, walking with a wide base gait which is normal for the child just learning to walk, fingering parts of the body which often occurs as a child gains awareness of his own body, excessive exploring with the hands of things in the immediate environment which a child normally does to satisfy his curiosity of things around him, and various manifestations of behavior to gain attention and reassurance of others which is the child's manner of reality testing and attempting to establish his own identity in the social environment. Blindisms such as these are often due to long term personality conflicts. Psychiatric evaluation is often helpful in determining whether there are unresolved personality conflicts which may need treatment. In some instances, the conflict which originally contributed to the fixation might have been resolved earlier and the external manifestations have continued merely as established habit patterns. In such cases, correction of the blindisms may be the same as discussed under the next type.

5. Habit patterns established by prolonged practice.

Blindisms which begin from any of the previously mentioned causes may become habit patterns which persist after the original causes may become habit patterns which persist after the original cause has been resolved. Blindisms may also develop from the mere gratification which the blind person receives from them without any of the previously mentioned causes being present. If not corrected soon, they may become habits which are difficult to change. Correction of blindisms which have become habitual is very dependent upon the motivation of the client to change his behavior patterns. If he has a real desire to improve his social acceptance, or if he can be convinced of his need for change, a cooperative plan between the client and members of a rehabilitation team may sometimes be successful. Such a plan involves certain conditioning techniques directed toward modification of the client's behavior. A structured environment such as a residential rehabilitation center in which the client and staff have contact during most waking hours over a prolonged period is necessary. As mentioned previously, the presence of internal emotional conflicts should be ruled out before attempting correction of the external manifestations.

A particular plan to deal with the habit patterns of blindisms may vary somewhat with each individual client. I will mention some techniques which we have found to be effective with some clients. An agreement is made with the client's full understanding that each professional staff member, including the Dormitory Director, will remind the client, consistently and in an unobtrusive manner, each time a specific blindism is observed. The reminder may be a light touch on the shoulder or some other cue which is understood by each, but which will not be recognized by others in a group causing embarrassment for the client. Such reminders are necessary because the client is usually unconscious of the blindism. As the external controls are consistently applied, the client will gradually become more and more conscious of the blindism and will begin to monitor his own behavior. He may eventually be able to overcome the habitual blindism. We have seen some clients who learn to control the blindism when they are aware that others are watching, but may revert to the old habit when they think no one is around. While the degree of success in these cases is questionable, we feel that the social handicap is reduced since blindisms are usually handicapping only to the extent that they are observed by others. Frequently, follow-up contact with the client after he leaves the Center is helpful to guard against a reversion to the blindism when away from the structure and scrutiny of the center staff. Compliments and other appropriate

reinforcements are just as essential to this conditioning process as the constructive criticism offered.

In conclusion, it should be pointed out that many blind persons do not manifest any of the blindisms which have been discussed, and no blind person has all of them. Also, some persons who are not blind manifest mannerisms which are similar to those we have called blindisms and often from similar causes. The problem for the blind person is that unnatural mannerisms which might have developed from various causes are attributed to the blindness by sighted persons, thus, increasing the handicapping effects of blindness. It is important that workers in rehabilitation of the blind understand and differentiate among the causes of blindness so as to be able to help blind persons prevent them or do what can be done to correct those already acquired. Through reducing the social handicap or blindness, we can help our clients to increase their opportunities for normal competition in the "sighted world".

THE ROLE OF MOBILITY INSTRUCTION IN PUBLIC SCHOOL PROGRAMS FOR VISUALLY HANDICAPPED

By

Frank Ryan

Editor's Note: This paper was presented at the 12th Annual Conference of California Transcribers and Educators of Visually Handicapped (CTEVH), March 11-13, 1971, San Diego, California. It appeared in the 1971 Annual Proceeding of that organization from which it is reprinted.

A speaker's role is alsways made easier when his topic has been preselected. Upon first seeing the title, "What Is Mobility?" on the Conference program, my initial reaction was, "How silly!" Surely, transcirbers and teachers of the visually handicapped are well aware of what "mobility is all about." Resisting the temptation to ask the program chairman for a change of title, I allowed my thoughts to reflect upon experiences of the past few years. I would like to share with you some personal experiences and opinions to explain my present feeling that more apropos title would have been indeed difficult to find. By and large, teachers and other workers for the blind have much to learn about what constitutes mobility for visually handicapped children. So that everyone feels equally offended, I hasten to include mobility instructors among these groups.

Oh, I am sure that most of use could readily parrot a textbook definition of the words "orientation" and "mobility". They are plentiful and easily found in the literature. Your image or impression of the mobility instructor may be the stereotyped one of a person who specializes in "cane wagging". Or, perhaps your image has been influenced by a particular instructor with whom you have had contact. I wonder if any of you share the impression which a resource teacher very recently outlined for me. To her, the mobility instructor was some elusive character who silently stepped into the back of her room and spirited away one student for each hour. Where they went, or what they did there, she did not know. But she assumed that it was all quite legal. General acceptance of the concept of this training as a vitally essential ingredient in this child's growth and development is wide-spread. Its praises have been so universally and righteously praised, I sometimes fear they will replace "motherhood" and "apple pie" as the stalwarts of American idealism. But, the gap between verbal acceptance of a "concept" and the actual, physical implementation of what that concept implies, can be wide indeed. As long as that gap exists, and even becomes increasingly wider, I will stand by my contention that we all have a great deal more to learn about the subject of blind mobility. Unfortunately, we cannot afford the luxury of a prolonged learning. Such procrastination has already taken a much too heavy toll among those for whom this entire education business is intended.

When mobility instructors first came onto the California public school scene, it is no secret that their arrival was greeted with mixed emotions by teachers of visually handicapped students. All too often, this position could be compared to that of the "new boy in town", who must first "prove himself" before being accepted as a member of the team. This point was made clear to myself at the 1969 Conference of the California Transcribers and Educators of Visually Handicapped. The conference was held that spring at the Mission Inn at Riverside, California.

Although it was nowhere mentioned in the printed program, mobility became a subject of much heated discussion and debate in one of the workshops. It had been announced that the State Department of Education had very recently established a teaching credential for Orientation and Mobility. The aftershock of this announcement was both staggering and amusing. Battlelines were formed between those teachers who welcomed this new state of affairs and those who questioned or rejected it. Feelings in this latter group were marked by uncertainty or outright disappointment. Standing just outside the doorway as participants left that particular workshop, I heard such comments as: "For years we've been teaching our pupils how to get around, and now they say we need a special credential to do it." To an extent, a similarity of pattern can be seen between mobility's positions in subsequent CTEVH Conferences, and its general growth in public school programs. From the 1969 Conference where the topic was only incidentally introduced, mobility was elevated to the point where it was assigned its own workshop at the 1970 meeting. Now, with an entire afternoon of its own, it has possibly reached a zenith of Conference recognition in 1971.

Lest I stray too long from the title of my presentation, an analysis of a few misconceptions not uncommon among workers for the visually handicapped may be in order at this time to illustrate my concern that there is still much to learn.

MISCONCEPTION #1

"Since John, a blind junior or senior high school student, can independently travel the routes to and from his classes, his mobility needs are met."

If these few specific routes were to comprise the life-long extent of John's travel, then perhaps some validity could be found for this statement. Little foresight should be necessary to envision the magnitude of the demands which will be placed upon him if he is to compete on even a semi-equal basis with his sighted peers, both now and in his future. Keep in mind the standards by which this blind person both judges himself and will be judged by others, namely; the accomplishments and abilities of his sighted peers. Unless you would not be concerned about a sighted classmate whose limits of independent functioning were similarly restricted, then don't be so quick to overlook the true needs of the visually handicapped pupil. Aside from parental control, the range of mobility for the sighted 16 or 17 year old becomes virtually limitless upon receipt of driver's license. With this as a standard of evaluation, what right do we have for assuming the needs and desires of the visually handicapped student to be anything less. True, he will never achieve the degree of mobility afforded by the driver's license, but competence with bus travel is a giant step in that direction. Although no figures are available to substantiate this opinion, personal teaching experience and reports of other mobility instructors lead me to believe that the reason most frequently stated for requesting this training for a particular student is his difficulty in traveling the school campus. Although it is commendable that the benefits of mobility instruction are recognized for these individuals, my real concern is for the much larger number of visually handicapped students having no observable travel problems on campus and for whom mobility is therefore frequently not requested. A practical evaluation of theri mobility skills all too often reveals that these so-called "capable" travelers have little or no concept of how to function mobility-wise when taken even one or two blocks from the protective, familiar confines of the campus. Even within the school grounds, their proficiency is greatly reduced if asked to stray or deviate from the few memorized routes. I propose that a thorough, on-going evaluation of every visually impaired child's mobility skills be instituted as a required step in his educational process. Such a policy would do much to identify and to remedy the true mobility needs of even the "apparently capable" travelers.

MISCONCEPTION #2

"Because she has "travel vision" and can see well enough to avoid objects in her path, Mary has no particular need for formal mobility training."

If time were not a factor, I would use my full allottment this afternoon to shoot down this falsehood. Unfortunately, on this score, mobility specialists are frequently as guilty as any other members of the teaching profession. The phrase "travel vision" in my opinion is a complete and utter misnomer, and should be eliminated from our vocabulary. The erroneous implications inherent in its use have unleashed untold damage and hardships for those youngsters so labeled. Just what is "travel vision"? According to the Department of Motor Vehicles I must possess it, as they saw fit to renew my driver's license. Perhaps the most ironic situation of all is the fact that a great number of persons so labeled either do not travel or travel inefficiently simply because of problems directly related to their visual condition. Negative aspects of the phenomena known as "labeling effect" is receiving increasing attention among educators. When told, for instance, that Tommy is "intellectually gifted", do we not subconsciously place certain expectations upon his academic performance? Is it no wonder that the low vision or partially sighted youngster to whom the label travel vision is assigned feels hesitant or even guilty in requesting mobility training when she fails to measure up to the levels of expectation held by parents or teachers?

Within the past year, my Irish temper has been remarkably restrained when mobility specialists in at least three California School Districts have expressed concern about the continued need for their services. Although stated somewhat differently, the arguments are typified by one specialist's concern, "We are running out of total". HOGWASH!! If a child's vision is impaired so as to necessitate special assistance or adaptations with daily tasks of reading and writing, then it is only logical to assume that he or she can also anticipate some degree of impairment with some of the finer tasks associated with independent travel. Implied in the usual definitions of "travel vision" is the idea that SAFETY is the only factor to be considered in measuring a visually impaired person's travel ability. Remember, in the competitive sighted world for which education is geared, performance will be judged in light of sighted peers. A second factor, namely efficiency, will be as much, if not more, a part of that evaluation than physical safety.

For the legally blind youngster whose vision may well be superior to a cane for locating objects, the mobility program may consist of learning and applying procedures for efficiently soliciting sighted assistance in such tasks as bus travel, department store shopping, or locating street addresses. Training in map reading and understanding complicated street or intersection patterns may also be greatly beneficial.

The student with lesser residual vision or with an unstable eye condition may achieve greater self-confidence and willingness to extend his travel to unfamiliar areas if he has been trained how to make greater use of visual landmarks and reference points to maintain his orientation. Knowledge of proper cane technique can also be a valuable asset in uncertain surroundings or in various conditions of lighting. Training in the use of hearing as an environmental sensor to supplement the faulty or inadequate visual perceptions may constitute another important phase of this person's mobility training. Regardless of the visual problem or degree of loss, it is imperative that this person be consciously aware of and able to interpret the environmental information which he is missing as well as that which he is receiving visually.

So long as the myth prevails among teachers, administrators, and parents that orientation and mobility instruction is the exclusive prerogative of those totally blind or nearly so, the ironic situation will continue by which this student's vision, useful as it may be, actually impedes the implementation of some potentially very beneficial services. I challenge you to have a frank and open discussion on this subject with your low vision students. Do not be surprised if you find, as I have found, cases such as the following: an eleventh grade girl with "travel vision" who is not allowed to travel alone to homes of her girl friends because the various routes involve travel over unpaved sidewalks and through traffic light-controlled intersections; or the case of an otherwise highly capable 14 year old boy who is afraid to walk unassisted to a neighborhood park less than three blocks from his home, simply because he has never done it and is not sure that he can.

MISCONCEPTION #3

"Since eleventh and twelfth graders have a 'priority' need for this service, the O & M instructor should be assigned to the high school level."

Although some may find the comparisons far-fetched, these may help to illustrate this misconception. Would a prospective engineer delay basic mathematics courses until after completion of his college career? Would an airline break-in an inexperienced pilot on the newest 747? Obviously, success with either of these or similar endeavors is contingent upon a history of previous successful experience with more basic, related, skills and knowledge. In no way can the fundamentals be bypassed on the road to achievement. This is no less true of mobility than of the examples referred to a moment ago. Success or failure in a mobility program is shaped to a great extent by the pattern of habits and life experiences which the student brings with him. Whether this is a pattern of dependency or independency is determined during the formative years and will be influenced by the child's concept of his individual worth and role in the family and school environment. The ability of the blind child to move about freely and to orient himself successfully is certainly a strong cornerstone of a positive self-concept.

The literature is replete with testimony of mobility's role in the economic and social adjustment of blind adults. If you accept this as valid, then I feel you must also accept the reality that the lifetime travel pattern of a student is at least partly shaped in elementary school. Personally, I feel it is shaped to a major extent during these early years, when attitudes and habits are in the process of development. "Mobility readiness" is not something with which the visually handicapped youngster is gifted at a specific chronological point in life. Rather, it is nurtured through meaningful interaction with the family and other elements within his environment. Yet, how often it is that a school district which eithers employs or contracts for the services of a mobility specialist, directs his time and attention almost exclusively to secondary school students, frequently emphasizing those closest to graduation. Obviously, these

young adults do have a special, perhaps urgent need for this training, and with little time remaining, the "priority" status is easily justified. Unfortunately, lacking a firm foundation of experiences and environmental concepts upon which to build, the normal delivery of instruction assumes a remedial nature. As with all behaviour, it is much more difficult to break and replace bad habits than to have started from scratch with good. How much more appropriate and beneficial the mobility program can be when conducted on a comprehensive scale incorporating the services of mobility instructors for students at all age and grade levels.

Although other examples could be cited as well, one precedent for such a program can perhaps be seen in that of the Los Angeles City School Districts in which for the past year a graduate mobility specialist has been employed to work exclusively with legally blind children at the elementary school level.

Another area of potential need, but one to which I will only allude without much elaboration, is that of multi-handicapped blind children. Because of the complex variety of physical and mental impairments which could be present in conjunction with blindness it is difficult to speculate or suggest specific roles for the mobility specialist. However, this area is not totally without precedent. Some very good reports are available describing the work of an investigation directed by Paul McDade at a school for mentally handicapped in Boston, Massachusetts. His project was designed to evaluate the potential value of formal mobility training for mentally retarded blind, and the results are promising indeed. The value of mobility training for deaf-blind adults has beenwell documented and described. Granted, there is much more than just an age differential when comparing the needs of deaf-blind adults and those of children whose handicapping condition is usually of a congenital nature. But, I am sure that many of the travel techniques and procedures developed over the past decade at the Industrial Home for the Blind and now incorporated into the curriculum of the National Center for Deaf-Blind Youths and Adults, can be adapted for at least the older youngsters with this double handicap. I hope that as the new preschool classes and programs for multi-handicapped children are established, the role of mobility and the mobility specialist as a team member will be considered.

I have referred to a few areas of concern and labeled them as "misconceptions." Whether or not they are truly misconceptions for you personally or for your school district, is for you to judge. One mobility specialist who read this presentation reacted that I have described problems that were prevalent a few years ago when mobility was in many cases a new, unknown aspect of the curriculum. But, times and opinions have changed and he felt most of what I have said is no longer valid. It is encouraging to hear this. And, for some local and county districts, perhaps your, this is unquestionably true. But the fact remains, there are a great many visually handicapped students in our public schools who are NOT receiving the type or scope or orientation and mobility training which is truly needed to prepare them for safe and proficient interaction with sighted society.

I assure you, I am not so naive as to assume that only a mobility specialist can teach the concepts and skills related to independent travel. Just as it is true that every classroom teacher is in a sense a teacher of reading, so it is that every itinerant, resource or special class teacher is also a teacher of mobility. But just as the reading specialist is available to those sighted younsters who for one reason or another need special, individualized assistance to read on a par with fellow classmates, so too does the visually handicapped child benefit from special instruction and experiences to travel on a par with these students. I don't have to convince this audience that teaching is a full-time job, whether it be as a resource room teacher or a classroom instructor of history or English. When the usual classroom duties are being conscientiously met, there is often little time or energy left over which the teacher can devote to the extensive mobility needs of the visually handicapped child. Concepts of size, shapes and spatial or positional relationships of objects and proper utilization of protective and information-gathering techniques do lend themselves quite readily to reinforcement in daily classroom activities. But, rarely would the resource room or special class teacher have the time to conduct individual instruction in such vital aspects of mobility training as the following: concept development of street patterns and residential block arrangement; graduated, sequential instruction in the use of a cane progressing from sidewalk travel to street crossings, to areas of pedestrian congestion, to public bus travel, to familiarity with department stores, shopping centers, and "downtown" metropolitan districts. It is in just such areas as these areas that the separation in the roles of the mobility specialist and classroom teacher becomes most evident. As has hopefully been evident throughout this presentation, alleviation of any of these needs involves much more than acceptance of a concept or theory. It requires a committment on a financial and personnel basis, as well. Neither am I so naive as to think finances are not a major stumbling block along the road to providing these services. But if your school system truly believes in, and is committed to guiding each child's growth and development toward achieving nothing less than his maximum potential, then this is a stumbling block which must be removed. Those California districts and schools currently providing such instruction have generally

financed it through the use of special additional funds provided for in Education Code Section 18102.9 (1) (3), from the general allottment of Special Class funds, or have secured outside funding through contractual agreements with public or private agencies. Unfortunately, such funding arrangements may frequently have built-in restrictions which tend to limit the delivery and extent of services. I will cite the two of greatest concern: when mobility instruction is contingent upon having extra funds from the state allottments, this service then takes on the appearance of a "luxury" item available to those districts with a visually handicapped student enrollment large enough to generate sufficient funds; where mobility instruction is funded through a contractual agreement, regulations of the participating agency may be such as to prohibit service from reaching certain segments of the student population.

One look at my personal financial condition would suffice as evidence that I am in no position to suggest alternative avenues of funding, but, I will close with two suggestions: (1) Re-examine your mobility services which are presently being offered or missing in light of the areas I mentioned earlier, and with a view toward the practical needs of visually handicapped children as future, productive and well-integrated citizens of a sighted society. (2) Where there is room for expansion of such services, expand them. Larger school districts should be able to find sufficient funding in the existing state allottments, smaller districts should join with neighboring systems in a cooperative program to secure funding through the various offices of the County Superintendents of Schools. Models for this latter choice already exist. Our responsibility to the teaching profession, the state, and most importantly to the children themselves, will allow us to do no less.

ABERRATIONS FROM PROPER TOUCH TECHNIQUE

An Outline

By

Bruce Wallace

This outline is intended to provide an overview of the problems that can arise as a result of the improper execution of the touch technique. It is hoped this will provide a quick reference for the analysis of a particular student's cane application. It is also hoped that this outline will bring into perspective the importance of each of the various components of the touch technique with respect to safe and efficient traveling practices.

I. GRASP

A. THUMB OF CANE-HAND NOT RESTING OVER TOP OF CANE GRIP

Possible Results: Tendency toward a wide arc on both sides; slight tendency to drop or lose cane.

B. CANE HAND VERY LOOSELY GRASPING CANE GRIP

Possible Results: Tendency to drop or lose cane; tendency toward poor cane control; slight tendency toward erratic arc.

C. RING FINGER AND LITTLE FINGER NOT GRASPING CANE GRIP

Possible Results: Wide arc to cane-arm side; tendency to slide cane tip along floor or ground surface; poor contact between cane-hand and cane grip (with tendency to affect sensitivity and cane control).

D. INDEX FINGER CURVED AND POINTING INTO CANE GRIP

Possible Results: Slightly decreased sensitivity to cane information; tendency toward high arc; slight tendency toward erratic arc.

E. INDEX FINGER POINTING DOWNWARD BELOW CANE GRIP

Possible Results: Slightly decreased sensitivity to cane information; tendency toward high arc; strong tendency toward a loose and uncertain grasp.

F. CANE-HAND VERY TIGHTLY GRASPING CANE GRIP

Possible Results: Tendency toward poor wrist action; decreased sensitivity to cane information; tendency toward a "jumping" or arhythmic motion of the cane; increased fatigue in cane-hand and cane-arm.

G. CANE-HAND GRASPING TOO HIGH ON CANE GRIP

Possible results: Decreased sensitivity to cane information; increased chance of adopting improper grasp.

II. ARM POSITION

A. CANE-ARM HELD TOO HIGH, FORMING ANGLE BETWEEN ARM AND CANE AT WRIST

Possible Results: Tendency toward awkward wrist action; increased weightload upon cane-arm; slightly shortened foreward coverage overall; tendency to place cane-hand off-center.

Note: Coverage is generally defined as the potential of the cane to warn the traveler of an object or a contour change within the intended path of travel. Forward coverage is herein defined as the coverage provided at any specific point (or points) in the arc, with the assumption that such "forward" coverage is equal to or greater than the normal stride of the traveler. Lateral coverage is defined as the full sweep of the arc across the intended path of travel, with the assumption that the measure of this sweep will be equal to or greater than the traveler's body width. The phrase effective coverage is herein used (for the purpose of clarity) in the meaning of a fusion of forward and lateral coverage into a complete or "working" coverage throughout the entire arc (or throughout a portion of the arc), and by this definition, "effective coverage" will specifically apply to the successful or unsuccessful accomplishment of both forward and lateral coverage. Thus a traveler who holds his cane rigidly in position may be provided with lateral coverage; and a traveler whose cane is shorter than his stride will not be provided with forward coverage, although he may be provided with lateral coverage.

B. CANE-ARM HELD TOO LOW, FORMING ANGLE BETWEEN ARM AND CANE AT WRIST

Possible Results: Tendency toward rolling wrist action; tendency to place cane-hand off-center to cane-arm side; increased chance of slow reaction time when cane catches or strikes object; slightly shortened forward coverage overall; increased chance of adopting improper grasp.

C. SIGNIFICANT ANGLE BETWEEN UPPER ARM AND FOREARM AT ELBOW JOINT

Possible Results: Strong tendency toward inadequate lateral coverage to the cane-arm side; decreased distance between crook and stomach to provide for freeplay; strong tendency toward low cane-arm position.

D. CANE-HAND NOT CENTERED, WITH IMPROPER PLACEMENT...

TO CANE-ARM SIDE

Possible Results: Inadequate effective coverage to free-arm side; tendency toward rolling wrist action.

TO FREE-ARM SIDE

Possible Results: Inadequate effective coverage to cane-arm side; tendency toward improper cane-arm position (vertically).

Aberrations From Proper Touch Technique (cont'd)

E. FREE-ARM STIFFENED, UNNATURALLY OR AWKWARDLY POSITIONED

Possible Results: May contribute to difficulty in holding a straight line while traveling; detracting appearance.

Note: Poor body position, including unnatural head positions and a tendency to lean the upper body forward or to the side, are possible contributing factors to improper cane technique and to the inability to hold a straight line while traveling.

III. WRIST ACTION

A. ROLLING WRIST AND FOREARM ACTION WITH NO LATERAL MOVEMENT OF ELBOW JOINT

Possible Results: Tendency toward high arc; tendency toward heavy-handedness in touching cane tip to the floor or ground surface; decreased sensitivity to cane information.

B. ROLLING WRIST AND FOREARM ACTION WITH CONCOMITANT LATERAL MOVEMENT OF ELBOW JOINT

Possible Results: Strong tendency toward high arc; strong tendency to place cane-hand off-center to cane-arm side; tendency toward heavy-handedness in touching the cane tip to the floor or ground surface; severely decreased sensitivity to cane information; tendency toward high cane-arm position; severely shortened forward coverage overall (due to the shifting of the pivotal point from the wrist to the cane's shaft)

C. LATERAL AND ROLLING MOVEMENT OF FOREARM WITH LITTLE OR NO WRIST ACTION

Possible Results: Tendency toward high arc; tendency to place cane-hand off-center; tendency toward heavyhandedness in touching cane tip to floor or ground surface; severely decreased sensitivity to cane information.

D. LATERAL AND ROLLING MOVEMENT OF ENTIRE ARM WITH LITTLE OR NO WRIST ACTION

Possible Results: Tendency toward high arc; tendency toward inadequate lateral coverage to free-arm side; strong tendency toward heavyhandedness in touching the cane tip to the floor or ground surface; severely decreased sensitivity to cane information.

E. LATERAL AND PENDULUM MOVEMENT OF ENTIRE ARM WITH LITTLE OR NO WRIST ACTION

Possible Results: Strong tendency to extend cane arc beyond point where the tip touches ground surface on each side; tendency toward heavyhandedness in touching cane tip to the floor or ground surface; severely shortened forward coverage to free-arm side.

IV. ARC

A. INADEQUATE LATERAL COVERAGE TO EITHER SIDE (INVOLVING IMPROPER OR INADEQUATE WRIST ACTION)

Results: Inadequate coverage to provide for safety; incomplete information transmitted through cane with respect to the intended path of travel.

B. WIDE ARC TO EITHER SIDE

Results: Extraneous information transmitted through cane with respect to the intended path of travel; likelihood of the cane catching or striking objects not within path of travel; increased chance of tripping or striking pedestrians with the cane.

C. HIGH ARC

Results: Tendency toward heavyhandedness in touching cane tip to the floor or ground surface; decreased chance of finding upcurbs or other significant surface-level discrepancies.

D. UNNECESSARY SLIDING OF CANE TIP ALONG GROUND OR FLOOR SURFACE

Results: Increased chance of snagging cane in rough surface areas; decreased efficiency of cane movement; increased chance of confusion relating to contour and texture changes.

E. HEAVYHANDEDNESS IN TOUCHING THE CANE TIP TO THE FLOOR OR GROUND SURFACE

Results: Decreased sensitivity to cane information; attention attracted to blindness (as a result of loud "tapping" sound of cane)

F. ERRATIC ARC

Note: An erratic arc may result in any or all of the deficiencies attributed to "inadequate lateral coverages to either side," "wide arc to either side" and "arhythmic or uneven motion of cane throughout arc". Special notice should be given to the following: lack of clarity and consistency with respect to cane information; inconsistent coverage to provide for safety.

V. IN-STEP

A. OUT-OF-STEP BY A FULL BEAT

Results: Extremely impaired forward coverage overall; incomplete information transmitted through cane with respect to the intended path of travel.

B. PARTIALLY OUT-OF-STEP

Results: Moderately to severely shortened forward coverage overall; incomplete information transmitted through cane with respect to the intended path of travel.

VI. RHYTHM

ARHYTHMIC OR UNEVEN MOTION OF CANE THROUGHOUT ARC

Results: Impaired effective coverage (deficient at those points in the arc in which the cane moves laterally at a very rapid rate); tendency toward heavyhandedness in touching cane tip to the floor or ground surface; tendency to have difficulty with in-step movement; ungraceful appearance.

VII. STRIDE AND RATE-OF-SPEED

A. HESITANT OR INEFFICIENT STRIDE AND/OR RATE-OF-SPEED AND/OR USE OF CANE

Note: Such behavior is usually due to a lack of confidence on the part of the student; it may also be due to various physical problems. In either case the situation must be taken quite seriously by the instructor, as almost every aspect of cane technique may ultimately be affected.

B. "CHARGING," OR AN EXAGGERATED STRIDE AND/OR RATE-OF-SPEED

Possible Results: Tendency toward "overstepping" of forward coverage; reduction of time to react to objects within intended path of travel; increased chance of blundering into adverse situations.

C. "OVERSTEPPING," OR INADEQUATE FORWARD COVERAGE (AS A RESULT OF ANY OF A NUMBER OF DEFICIENCIES, INCLUDING A DISPARITY BETWEEN CANE LENGTH AND THE LENGTH OF STRIDE)

Results: Inadequate forward coverage to provide for safety; incomplete information transmitted through cane with respect to the intended path of travel.

PATTERNS OF TRAVEL FOR BLIND TRAVELERS

By

Robert M. Friedman

This is a contribution to a system of orientation useful for blind people. It is by no means complete but merely a statement of one of a number of components to be included in a comprehensive series of lessons designed to maximize the orientation of blind individuals.

After the student demonstrates a clear understanding of his person, orientation lessons generally tend to focus on environmental factors useful to maintain orientation such as global directions, landmarks and auditory clues.

PATTERNS OF TRAVEL

The student's orientation is increased if attention is systematically focused on his patterns of travel.

Patterns of travel refer to the routes we all follow in moving from an original location to a destination. These patterns are defined by the environment in which we live. We shape our cities and then they dictate our movement.

Four Patterns of Travel

The patterns of movement all of us travel several times per day in moving from original locations to destinations can be labeled as "I", "L", "T" or "Z" trips.

In working with congenitally blind students, it is useful to call these patterns of travel to their attention through a series of lessons that occur and are repeated at different times throughout the sequence of orientation and mobility instruction. The concepts of patterns of travel are not difficult to grasp and can be taught to students diagnostically classified as educable mentally retarded.

Use by Sighted Individuals

Patterns of travel can also be used by sighted individuals to maintain and maximize orientation in places where there are few useful visual landmarks. For example, consider a large open airport parking lot with row upon row of parked cars

and a paucity of distinct visual landmarks to direct one in traveling from the entrance to where a car was parked three days prior. If, at the time the car was parked, it is remembered that the pattern of movement from the entrance to the parked car is a long distance "L" trip, and, if upon returning a long distance "L" trip is walked, it is very likely to deliver the traveler very close to the stall where the parked car is located.

Definition of Patterns of Travel

A long distance "L" trip is merely walking a straight line, making a quarter turn and then walking another straight line (ן,ר). One must have in mind what a long distance "L" trip is as distinct from medium and short distance "L" trips.

It may be that the pattern of travel from the entrance of the parking lot to the stall where the car is parked is an "i" trip, that is, a straight line of direction; a "L" trip, or a straight line of movement, quarter turn, straight line of movement, quarter turn in the same direction as the first quarter turn and then another straight line of movement (ש,כ); a "Z" trip, or a straight line of movement, quarter turn, straight line of movement, quarter turn in the opposite direction from the first quarter turn and then the third straight line of movement (ר,ף).

No matter what kind of trip it is, in the absence of visual cues, patterns of travel offer the likelyhood of delivering the traveler reasonalby close to the destination.

Prerequisite Learnings

In order to teach patterns of travel to blind orientation and mobility students, the following prerequisite learnings are useful:

(a) Ability to stride forward reasonably straight.
(b) Ability to distinguish between right and left.
(c) Ability to make reasonably accurate right and left quarter turns.
(d) Ability to travel from an original location into mid-space for short distance trips, to the border between mid and far-space for medium distance trips and into far-space for medium distance trips and into far-space for long distance trips.[1]
(e) Understanding of the words original location, destination and return trip.
(f) Concept of a city block.
(g) Introduction to the concept of an intersection.

PROCEDURES FOR TEACHING

Patterns of travel are introduced after the student has begun to cross residential streets.[2] The procedure for the presentation is tactual, kinesthetic and then to the actual situation.

The fact that patterns of travel are called trips and that they resemble ink-print letters is a motivating force in the presentation of the lessons.

Outline of Presentation

(a) Introduction. Explain that in traveling from an original location (where you are) to a destination (where you want to go) there are certain patterns of movement that are naturally followed.

(b) Tactual. Present the "i" trip on a tactual map. This is merely a raised straight line. Indicate the original location at one end and the destination at the other. Direct the student to pass his finger from one point to the other and return. Question to check understanding and explain that an "i" trip can be of short, medium or long distance. Question to check understanding.

(c) Kinesthetic. Direct the student to list "i" trips he travels during the day. (From one side of the room to the other? From the sidewalk to the front door?) Direct the student to walk an "i" trip he is familiar. Distinguish between short, medium and long distance trips.

(d) Actual. In the residential area in which he practices, direct the student to walk short, medium and long distance "i" trips. From the sidewalk in front of the house nearest the corner to the corner. From the sidewalk in front of a house in the middle of the block to the corner. A long distance "i" trip fron one end of the block to the other. Many students will grasp the concept of an "i" trip and it various distances without this many repetitions.

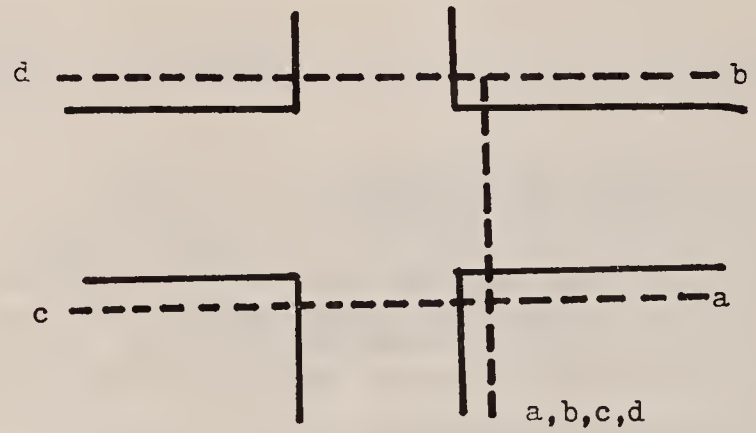
It is important to test the student's knowledge of the concept of an "|" trip by directing him to travel a medium distance "|" trip so close to an intersection that it will include crossing the street. The correct response is to walk to the corner, cross the street and continue walking straight ahead. The additional factor of having a street to cross requires the student to think before he travels. The student should also make the return trip from the destination back to the original location.

"L" Trip

The "L" trip is presented in the same manner is the "|" trip. Throughout the tactual, kinesthetic and actual phases, it should be indicated that the turn in the "L" trip can be either to the right or left. The return route should also be traveled. In actual situations, the student travels and "L" trip in walking on the block and then turning onto the path leading to the front door of a house or walking around the corner, etc.

The test for the understanding of the concept of the "L" trip is to direct the student to travel an "L" trip at an intersection where street crossing is necessary:

(a) Travel an "L" trip without crossing any streets and return.
(b) Travel an "L" trip crossing one street and return.
(c) Travel an "L" trip crossing one street, not the street crossed last time, and return.
(d) Travel an "L" trip crossing two streets and return.



If time permits, it is useful to review the exercise beginning from different corners of the intersection.

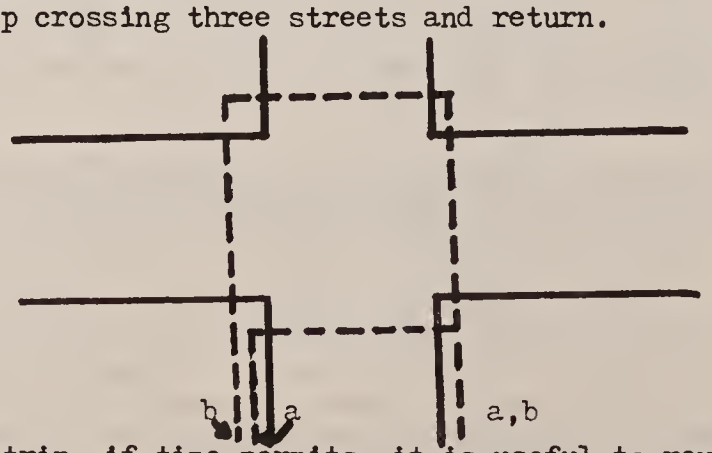
Not only is the student's concept of a conventional intersection strengthened by this exercise but he also begins to understand the patterns of movement that are naturally traveled at intersections.

"⌜" Trip

The "⌜" trip is introduced tactually, kinesthetically and then presented in the actual situation with emphasis on the quarter turns being in the same direction. Original motivation is not only sustained but increased.

To test the student's knowledge of the concept of a "⌜" trip, at a residential intersection, direct him to:

(a) Travel a "⌜" trip crossing one street and return.
(b) Travel a "⌜" trip crossing three streets and return.



As with the "L" trip, if time permits, it is useful to review beginning from different corners of the intersection.

Students can also be directed to travel a "C" trip crossing two streets. This cannot be done but the responses are interesting.

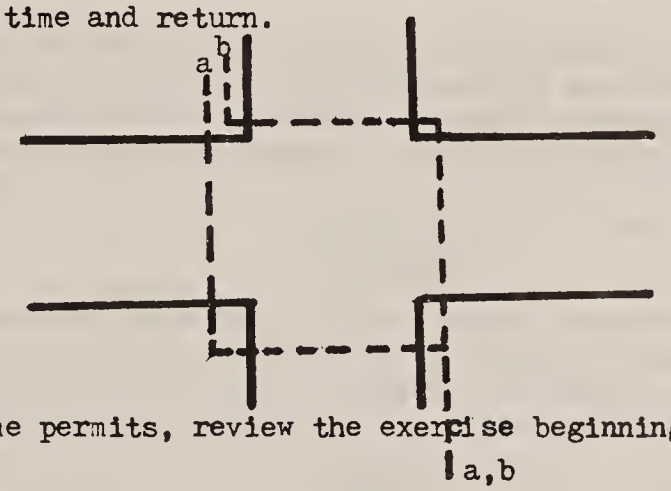
As the trips become more complicated more concentration is required. A student who cannot understand a "C" trip should return to the "L" trip in order to discuss and practice, tactually and kinesthetically, its extension into the "C" trip.

"Z" Trip

The "Z" trip is introduced in the same manner as the others with emphasis on the quarter turns being in opposite directions, the difference between a "C" and "Z" trip and the return trip.

In order to test the student's knowledge of the concept of a "Z" trip direct to him to:

(a) Travel a "Z" trip at the intersection and return.
(b) Travel a "Z" trip at the intersection without crossing the streets at the same place they were crossed last time and return.



Here again, if time permits, review the exercise beginning from different corners of the intersection.

This series of lessons may take as long as a month but after the student has completed them he will have had a great deal of organized experience traveling at residential intersections. He will have systematically practiced crossing one or more streets at the same intersection in every conceivable combination except completely boxing the intersection which is a rare pattern of travel in moving from original locations to destinations.

In addition, the instructor will have had the opportunity to evaluate the student's progress in the areas of concepts, locomotion, procedures, use of sensory data and technique.

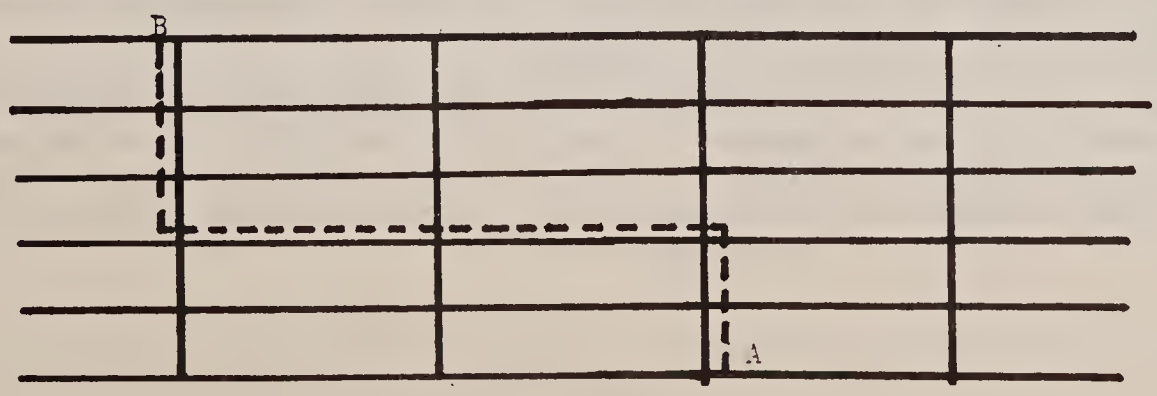
RESIDENTIAL TRIPS

Patterns of travel are again discussed when the student begins to make trips in the residential area. No matter where he goes, whether it be from one house to another, from home to neighborhood market, to the bus stop, etc., it is likely that, in essence, the student's pattern of travel will be an "I", "L", "C", "Z" trip or a combination thereof.

This should be indicated to the student; he should have practice labeling his trips according to their pattern; lessons on trip planning according to patterns of travel should also be included.

The student should begin to think of his movement at intersections and from almost any original location to a destination in residential and business districts as governed, in essence, by patterns of travel.

This is useful because it increases the student's orientation by structuring the space in which he moves. For example, consider the traveler who desires to walk from original location A to destination B:



He comes to the point on his route of travel where he has to make the final turn before walking the last leg of the trip. Let us suppose that he forgets which way to turn and that there are no useable clues. If this student knows he is traveling a "L" trip, he need not rely on anything external to himself for recovery. It is only necessary that he remember the direction of his first turn. If it was to the left, then by the definition of the "L" trip, the second turn must be to the right.

INDOOR PATTERNS OF TRAVEL

Patterns of travel are also useful in maximizing indoor orientation by structuring indoor space. Although this subject cannot be treated here at length a few comments are in order.

Similiar patterns of travel are often common to similiar types of business establishments. For example, the pattern of movement from the entrance of most dry cleaning businesses to the service counter is an "I" trip and from the entrance of many supermarkers to the turnstyle is usually an "L" or "Z" trip.

One the West Coast standardized indoor patterns of travel are on the increase. Many large firms previously doing retail business in the center of the city are now constructing branch outlets in suburbs. Notable is the common indoor geography of these branch buildings. The same patterns of movement found in one large commercial enterprise are seen in its branches throughout the metropolis.

CONCLUSION

Structuring space with patterns of travel enables the blind traveler to categorize and thus more economically store information pertaining to where he wishes to go. Acquiring the ability to conceptualize trips in terms of patterns of travel requires less reliance on factors external to the traveler and provides procedures to begin independent exploration with increased certainty.

FOOTNOTES

[1]Ray H. Barsch, Enriching Perception & Cognition. Techniques for Teachers, Volume 2 of a Perceptual-Motor Curriculum (Seattle, Washington: Special Child Publications, Inc.: 1968) pp. 49-50.

[2]Patterns of travel are naturally occurring ways of moving about in daily life. They should be presented to the blind student long before formal orientation and mobility instruction is initiated.

THE BINAURAL SENSORY AID - PLANNING FOR THE FUTURE

By

Derek Rowell, Ph.D.

Now that we are coming to the end of the first phase of the evaluation of the Binaural Sensory Aid (ultrasonic glasses), it may be useful to briefly review the past two years and to describe what is happening related to further development and evaluation of the device.

There are now approximately 150 of the evaluation devices in use throughout the world, in the USA, Australia, England and New Zealand. In this country independent evaluation programs have been based at the following: Arkansas Enterprises for the Blind, Boston College, The Carroll Rehabilitation Center for the Visually Impaired, Illinois Visually Handicapped Institue, The Seeing Eye, Veteran's Administration Blind Rehabilitation Centers at Hines, Palo Alto, and West Haven; and the Western Michigan University together with the Michigan Rehabilitation Center for the Blind. Since March 1971, we have acted as a coordinating team based within the Division of Special Education and Rehabilitation, Boston College to provide technological and consultative support for the separate programs in the agencies, and to provide training courses for the instructors.

The primary method of evaluation used by our group at Boston College was an extensive questionnaire survey of both instructors and experienced device users in March 1972. A summary report prepared by our consultant, Dr. Peter Airasian, describing the results of both surveys is soon to be published in the AFB Research Bulletin, No. 26. Those of us actively involved in planning the future of the device believe that the responses of both users and instructors were sufficiently enthusiastic to warrant further development and production of a fully engineered version suitable for distribution on a wider scale. Therefore we are now entering into a new phase of the development of the device.

We have found some encouraging things about the use of an auditory display for mobility. We feared that the sounds from the device might have caused masking of ambient sound cues and that the presence of ear molds might cause occlusion. After three years of experience we have found no significant effects of occlusion. In many cases the users are unaware of the effects of the earmolds. With device usage, masking is not a significant problem. An unexpected result has been that several users have reported an enhanced ability to use ambient auditory cues. It appears that the device signals are compatible with the use of the accustic environment for mobility.

The devices used in the program to date were manufactured by Vigilant Ltd., of Christchurch, New Zealand under contract to the agencies. These units were designed to demonstrate the relevance of the auditory display of the environment to the mobility problem, without undue expenditure of the limited resources available on cosmetics and operating convenience. In other words the devices were considered to be prototypes for evaluation purposes and as such contained several engineering compromises that affected their suitability for general release to the field of mobility. Vigilant Ltd. had stated at the outset that if the evaluation demonstrated that the device was useful they would undertake a complete redesign and development program to produce a model for general release. This project is already underway and is being supported by the New Zealand Government. We now expect that the new device (to be known as the MkII binaural sensory aid) will become available in mid-1974. The emphasis during this project is being placed on device reliability, operating convenience and improved cosmetics. Vigilant Ltd. will be working closely with our group and all of the instructors in the evaluation program to ensure that the MkII device meets the requirements of the field of mobility. The manager of the binaural sensory aid division, Dr. Russell Smith, will be making frequent visits to this country to discuss the new device at all stages of its development and to seek the comments of all who have had experience in teaching.

During the interim period until the new device is available Nancy Bell and I will be working at the Sensory Aids Evaluation and Development Center at the Massachusetts Institute of Technology to ensure that all matters relating to training and organization are ready for the new device when it becomes available. We are currently writing an expanded training manual and will be developing aids to training for use by instructors.

Future instructor preparation will be handled by Boston College and Western Michigan University. During the next eighteen months we will be working closely with both schools in the development of curricula and courses. It is still too early to give detailed plans for these courses, but we can say that we expect the first course to be held in August 1974 and that these courses will probably require full time attendance for 4-6 weeks.

We do feel that instructors must have a thorough understanding of the priniciples of operation of the device, as well as knowing how to teach it. To demonstrate the use of the device each student will be required to spend sufficient time under blindfold with the device to learn its uses and its limitations. We hope that some provision can be made to allow for a short period of supervised training after taking the course.

We are currently preparing the first of what we hope will become a series of newsletters, to be produced in conjunction with Vigilant Ltd., to keep the field informed of the progress of the project. We would be very happy to included anybody working mobility or an allied field on the circulation list. If you are interested in receiving the newsletter please write to us at: Binaural Sensory Aid Project, Sensory Aids Evaluation and Development Center, Room 31-063, Massachusetts Institute of Technology, 77 Massachusetts Avenue, Cambridge, Mass., 02139.

A CONFERENCE ON THE EVALUATION OF MOBILITY AIDS

By

Derek Rowell, Ph.D.

A conference was held under the auspices of the Sub-committee on Sensory Aids, Committee on Prosthetics Research and Development, of the National Academy of Sciences, at the Illinois Visually Handicapped Institute on November 13-14, 1972 to discuss the evaluation of electronic aids to mobility. The participants included technologists and mobility instructors who had been involved in the two current evaluation programs: that of the laser cane, and the binaural sensory aid. The conference met to discuss a number of problems related to the organization and execution of evaluation projects in light of the experiences of both projects. The aim of the meeting was to produce a set of guidelines that might be used in the design of future projects.

Two major themes emerged from the conference. The first was the lack of an objective method of measuring mobility skills that can be used to estimate the effect of a device on mobility performance. The conference formed an "ad-hoc" committee of mobility instructors to delineate methods of assessing the critical tasks in mobility. The conference also asked that the Sub-committee on Sensory Aids give consideration to the possibility of forming a group to recommend on the deployment of mobility aids. The other theme that emerged was the importance of reliability of devices submitted for evaluation, and the effects of device quality on the outcome of an evaluation project.

REFLECTIONS: TRAVELING WITH THE ULTRASONIC BINAURAL AID

By

Donald Rapp

Background

In May 1971, I was selected as a candidate to be trained with the Ultrasonic Binaural Aid and have thus used the aid for nearly two years. I was fortunate to be in the Boston area, near Boston College, where Professor Kay and his New Zealand team were located.

At that time I was preparing to take a leave of absence from my job as the educational program coordinator for the blind, retarded at the W.E. Fernald State School so that I might fulfill my residency requirements at Boston College as a doctoral student.

My first reactions to the binaural aid were positive. I liked the idea of the glasses because they were the most appropriate location for transmission and reception. The reception through the bilateral auditory channels suggested to me the potential this device has for blind travelers. I conjectured that the aid would help me to become acquainted with the environment, (familiar and unfamiliar) and be more acutely cognizant of social encounters, and be receptive of information extending according to Euclidian dimension, (left, right, front, up and down, excluding back).

Having had sight for twenty-four of thirty-eight years, the binaural aid helps me to maintain the concept of size and dimension of objects I encounter in a 15 to 20 foot radius. This spatial awareness definitely aids in obstacle detection, and as an environmental sensor.

Traveling With The Aid

Traveling indoors required a great deal of discrimination and differentiation of objects. I found the glasses helpful in locating rooms. Without trailing the wall I could walk down a hallway and detect the third door on my right while being aware of the other doors on my left. Many times there might be a chair, wastebasket, or student in my path.

There is a great deal of information received through the aid which must be processed. Sometimes various stimuli must be ignored in order to attend to specific destination. For example,

when I walk down a hall talking to another person, on my way to an office, the aid is receiving bilateral information which I have to differentiate. This information would include doors on the left, student lockers on the right, students standing or sitting on the right or left, inanimate objects in the path, and another person coming down the hall on the other side. Besides this variety of stimuli, there is also a ground noise from the device. I find myself attending only to the specific task of conversing with the friend and finding the doorway I want. Such feedback is so involved that each experience is a learning situation, and an obstacle may be overlooked, which the cane will then detect for me.

While traveling in my neighborhood and on the Boston College campus, I have been able to discriminate between the sidewalk and grassline, which is possible with practice. Regradless of how insignificant this type of information might be, it does aid in parallel walking without guidelining with a cane. When walking in open terrain, I have used the binaural aid to scan for a specific building, and upon detection of the building, I find the corner where a sidewalk contines alongside the building toward my particular destination.

In the residential community where I live, there are many young trees with branches extending over the sidewalk. It is a young community, with children of all ages. In good weather there are many tricycles, bicycles, wagons and toys left on the sidewalk or in the yards where one is likely to travel. While traveling to the shopping center or bus stop I experienced a reduction in anxiety, becoming aware of a low branch and compensating by ducking and continuing on my way. Other obstacles which I was able to circumvent without cane contact were bicycles, tricycles, and trach bags or barrels. This awareness of objects and their location provided feedback concerning the stimuli present in the travel environment.

As I traveled to shopping centers and bus stops, I was aware of social encounters such as young children quietly playing, neighbors in their yards or on the sidewalk, people waiting for the bus, and shoppers moving in different directions. This social detection allows the blind person the opportunity for making the first greeting, facing the person, and following his movements while talking.

While traveling in a central shopping district, I felt more relaxed in knowing that by using the window fronts as a reference point, I could walk parallel to the buildings and could locate openings. On the curb side, the detection of parking meters, poles and cares were used as guides for parallel walking. While traveling in shopping traffic, the binaural aid made me aware of pedistrians walking slowly in front of me, or waiting for the light to change. This prevented my having cane contact with another person. When crossing at an intersection, I would use the aid by following the person in front of me, and if no one was there, I would detect the approaching curb or pole on the other side, which gave direction. While traveling, I relied not only on the glasses, but also on ambient sounds detected auditorily.

Reflections

Many times individuals have asked me specific questions about the ultrasonic aid. How many hours a day do you use the device? I use it traveling to and from work, and going to the various buildings on the Boston College campus. I sometimes use it inside a building going from floor to floor, gaining more experience detecting various obstacles. The time varies from day to day, perhaps from one and one-half to three hours. I do not use the glasses inside my house, when I am sitting at my desk, or when traveling in a close familiar vicinity such as the department where I work.

Another question: Can you travel just as effectively without the glasses? Yes, one can travel without the binaural aid, but when I do, I am very conscious of the fact that I am not receiving information such as a parked car in my path, which I could avoid, or objects and people that are silently in my path. After two years of travel with the device, learning does not cease. As individuals with sight never cease perceiving new stimuli visually, the same is true with the ultrasonic binaural aid.

The Aid in its present-form obviously needs refinement in the technological sense. Such improvements over the next few years will enhance the ability of a blind person to travel comfortably and proficiently.

MOBILITY MAPS FOR THE BLIND
REPORT ON A CONFERENCE AT THE UNIVERSITY OF NOTTINGHAM, ENGLAND
September 14-16, 1972

By

Billie Bentzen

A current project on tactual maps, conducted by research centers at Nottingham, Birmingham and Warwich Universities, has opened up the possibilities of providing to teachers of the blind and to blind travellers, highly accurate, and relatively inexpensive tactual mobility maps through the use of a computer aided map design and reproduction system. There is no standard in England, (or in the U.S.) however, for what information should be included on such maps, what symbols should be used to convey necessary information, or what scale or size is optimal.

This working conference brought together three groups of people, primarily from England, who were involved in some way with tactual maps. Its purpose was the sharing of needs, progress and problems regarding tactual maps, and the formulation of a strategy for future research leading investigators involved in mobility map design and production, teachers who were making and using their own maps, and blind travellers who were interested in the possibility of greater independence which could be provided by mobility maps.

The techniques for making route maps or sequential maps were presented, both of which were first developed by the late Dr. J. Alfred Leonard. Grahame James, investigator, presented a technique for making and using a verbal route map recorded on a cassette tape recorder. Some standard verbal instructions were accepted for use on this type of map. David Mumford, mobility teacher, presented a tactile map which consisted of a plastic disc marked with braille code letters for commands, and having a moveable pointer to enable the traveller to keep himself up-to-date on his position on a route. Agreement was reached on a standard set of symbols for use on such a disc. Both of these sequential maps have enabled blind subjects to complete complex, unfamiliar, routes without further assistance. The verbal map could include far more information than the disc, and could be a valuable aid to a mobility teacher who will have a limited amount of time to familiarize a student with numerous routes. The same system could be used by a blind traveller himself, working from a verbal description of a route into a 16 segment series of one or two braille letters each, giving the traveller instruction to follow at the end of each block. For example: "c--cross and go straight ahead," or "r--right at down curb." In this map, the briefest information enabled successful travel in an unfamiliar area. Like the verbal map, the disc could be prepared by a mobility instructor or a blind person himself, on a commercially available disc with a pointer.

The main attention of the conference was given to area maps which enable blind travellers to plan as well as to travel new routes. Four outstanding presentations were made by mobility teachers who regularly use tactual maps. These teachers were, David Mumford, Mrs. F.H.G. Tooze, W.J.J. Kooyman (Netherlands), and W. James Pickles. These teachers, working with little knowledge of each other's work, have developed remarkably similar programs. All have students explore their immediate environment and then map it, using such devices as magnetic rubber backing, or the Sewell raised line drawing kit. Beginning at age eleven, Mrs. Tooze's students have a systematic program of environmental exploration, map making, map reading, and map-guided travel. Kooyman, Pickles and Mumford carry map making, reading and use into the advanced stages of travel with the long cane. They all use variations of a technique of making master maps with string, sandpaper, wire mesh, fabric, lineoleum blocks, etc. glued onto a plastic backing. The masters are duplicated by the Thermoform process. Large scale maps are produced and used to aid concept formation and small scale maps are produced to be used in route planning and travel. The students of these teachers are encouraged independently to explore their school and community environments by using the maps made for them. Mr. Pickles furthers the independent travel and exploration of his students by presenting to each one, on completion of mobility instruction, two maps of his own home area, based on available print maps. He makes a large scale map to help the student form a good mental image of the area, and a small scale map to be used in route planning and travel. The ingenious maps made by these four teachers have been used throughout the mobility training of their students, and these teachers consider their maps an indispensable aid in teaching mobility despite the hours that must go into the construction of each map.

A program for teaching mobility map reading was also presented by Professor of Geography, Joseph Wiedel of the University of Maryland. The masters for Prof. Wiedel's maps are made by the techniques of embossing symbols into heavy aluminum foil with various hand tools to produce

a variety of raised point and line symbols. The maps are reporduced by the Thermoform process and are ink printed as well as raised so they can be utilized by partially sighted as well as totally blind travellers. The program for teaching map reading, however, seemed less effective than those employed by Mrs. Tooze, W.J.J. Kooyman, W.J. Pickles and D.O. Mumford, because it emphasized only map reading and not also student map making.

Adult blind travellers in England can obtain maps on request made by a group of volunteers directed by N.H. Winterbottom. These volunteers employ variations of the "string and sandpaper" technique to make map masters. Reproduction is a process of vacumn forming on a "Daniels" machine, using thin, flexible, transparent sheets of polyvinyl chloride which are less brittle than Brailon (used in the Thermoform process) but which do not show details as clearly.

The highly accurate, fast, flexible, and relatively inexpensive system of designing and producing maps with the aid of a computer was presented last in the program. This system developed by John Gill, makes possible the design of maps with virtually any line or point (and perhaps areal) symbol, at any size or elevation, within a matter of minutes or hours, without painstaking hand-crafting. The designer's imput to the computer is through a co-ordinate table on which he traces the lines he wishes on the map, and through a typewriter keyboard utilizing a Fortran 4 program of symbols and their dimensions. A joystick can be used to position standard symbols. Text, which is converted to braille, can be input from the keyboard.

Output from the computer can be in print and on magnetic or punched paper tape. Maps can be stored on tape and then quickly modified at a later date. The tape directs a numerically controlled engraving machine which engraves a negative plastic master map. A positive copy of the master is produced by coating the negative with an epoxy resin. The positive is used to make heavy Brailon maps on a standard Thermoform machine.

The system has already been used to produced highly accurate testing materials to determine discriminable line, point and areal symbols, and to make a variety of maps. Pair-comparison testing of symbols produced by this process, by Grahame James and John Gill, has resulted in identification of 13 point and 10 line symbols which are highly discriminable and suitable for use on tactual mobility maps.

The initial equipment investment for computer-aided design and production of tactual maps is large, or course, but the same equipment would be equally useful in the production of geographic maps and of diagrams for the blind. It is the only system of producing tactual maps presented so far which appears to make possible by other than hand processes the economical production and reproduction of a great variety of maps in the small numbers which will be desired by blind travellers. This economy is achieved by shortening design time and eliminating the need for preparation of an accurate visual equivalent of the tactual map. A production center is proposed, to which mobility instructors could send commercially available print maps of areas of interest to their students, with items of special interest marked, and from which they would receive finished copies of tactual maps for their students.

The proceedings of the conference are to be published, but of more use to persons interested in making mobility maps is a forthcoming "handbook" of map-making techniques, sources of supplies and symbols and criteria found successful in the preparation of mobility maps. This will be based on the conference and on the results of an informal survey of participants who indicated that information they desired to have included in tactual maps and some criteria which should be considered in their production.

Conference participants were anxious to have some consensus concerning the direction of future map production. In the concluding session of the conference they reached agreement on five points.

1. Scale-maps of residential or business areas should be produced at 1/2500 (25" = 1 mile) if they are to emphasize learning or understand the details of an area and also at 1/5000 (12.5" = 1 mile) for general orientation and route planning.

2. North should be indicated by a dotted line along the length of the appropriate edge, usually the top.

3. The title and date of production should be put at the top of the map in braille. Provision should be made for updating maps when necessary.

4. Braille labels need not be on the map but on a separate sheet or overlay to be used on top of the map itself.

5. Symbols for the following landmarks should be standardized for use on maps for mobility: a) streets, b) footpaths (sidewalks), c) north, d) traffic light road junction, e) roundabout (rotary), f) bus stop, g) zebra crossing (crosswalk), h) steps, i) buildings, j) building entrances.

The conference fulfilled its objectives well. It would seem that a similar meeting in the United States would be invaluable in helping us coordinate research on, teacher production of, and actual use of mobility maps in this country.

CODE OF ETHICS FOR ORIENTATION AND MOBILITY SPECIALISTS

BY
WILLIAM WIENER

(Adopted by Interest Group #9 of the American Association of Workers for the Blind, July 1973)

PREAMBLE

Orientation and mobility specialists (peripatologists) recognize the significant role that independent movement plays in overall growth and functioning of the individual and are dedicated to helping each individual attain the level of indpendence necessary to reach his full potential. Orientation and mobility specialists gather, develop, and utlize specialized knowledge in accomplishing this goal. As with all professions, the possession of special knowledge obligates the practitioner to protect the rights of the individuals who must avail themselves of the particular service. To assure the public of our awareness of this obligation, we commit ourselves to this code of ethics.

In order to fulfill this obligation orientation and mobility specialists pledge themselves to standards of acceptable behavior in relation to the following five commitments:

Commitment to the Student
Commitment to the Community
Commitment to the Profession
Commitment to Colleagues and Other Professionals
Commitment to Professional Employment Practices

It is the duty of each orientation and mobility specialist to adhere to the principles in the code and encourage his colleagues to do the same.

1. Commitment to the Student

1.1 The orientation and mobility specialist should value the worth and dignity of each individual.

1.2 It is the responsiblity of the orientation and mobility specialist to strive at all times to maintain the highest standards of service by providing instruction in accord with procedures indicated in section S-3 of the The Comstac Report and in accord with the physical, personal, and professional qualifications accepted as the criteria for certification by Mobility Interest Groups of AAWB and AEVH.

1.3 The orientation and mobility specialist should take all reasonable precautions to insure the safety of his student and to protect him from conditions which interfere with learning.

1.4 The orientation and mobility specialist should should respect the confidentiality of all information pertaining to the student. He must not divulge confidential information about the student to any individual not authorized by the student to receive such information unless required by law or unless withholding such information would endanger the safety of the student or the public.

1. Comittment to the Student (con't)

1.5 Before beginning lessons with the student, the orientation and mobility specialist should make every attempt to obtain and evaluate information about the student which is relevant to the orientation and mobility training.

1.6 The orientation and mobility specialist should respect the right of the student to participate in decisions regarding his training program.

1.7 Decisions regarding continuing or discontinuing training should be made with the student and should be based upon objective evaluation of the student's needs, abilities, and skills. These decisions should be made independent of personal or agency convenience.

1.8 The orientation and mobility specialist should provide sufficient information regarding the various types of orientation and mobility guidance devices and should explore with the student which device will best meet his needs.

1.9 The orientation and mobility specialist should seek the support and involvement of the family in promoting the student's training goals and in advancing his continued success. This should include sharing information with the family that will facilitate the student's welfare and independence, but not communicating information which violates the principles of confidentiality. The orientation and mobility specialist should not change training objectives upon suggestion of the student's family if the specialist's professional judgements would be compromised.

1.10 The orientation and mobility specialist should ask the consent of the student before inviting others to observe a lesson or before arranging to have the student photographed or taped recorded.

1.11 The orientation and mobility specialist should make all reports objective and should present only data relevant to the purposes of the evaluation and training. When appropriate, he should share this information with the student.

1.12 It is good practice to consult with another orientation and mobility specialist when assistance is required in evaluating students.

1.13 The orientation and mobility specialist should endeavor to provide all individuals involved with the student, with sufficient knowledge, training and expreiences relative to orientation and mobility so as to facilitate the goals of student.

1.14 The orientation and mobility specialist should not dispense or supply orientation and mobility equipment unless it is in the best interest of the student.

1.15 The orientation and mobility specialist should not allow consideration of his own personal comfort or convenience to interfere with the design and implementation of necessary travel lessons.

1.16 The orientation and mobility specialist should be responsible for services to students referred to him and should provide adquate ongoing supervision when any portion of the service is assigned to someone else. He should not assign to a less qualified person any service requiring the skill and judgement of the AAWB certified orientation and mobility specialist. Such duties or services may properly be assigned to interns or student teachers who are enrolled in orientation and mobility university programs with the understanding that each individual will function under strict supervision.

1.17 The orientation and mobility specialist should make every attempt to see that follow-up service is provided at the completion of training.

2. Commitment to the Community

2.1 The student should not be refused service by the orientation and mobility specialist because of age, sex, race, religion or national origin.

2.2 The student should not be excluded from service because of the severity of his disabilities unless it is clearly evident that he cannot benefit from the service. The orientation and mobility specialist should attempt to influence decision making which establishes the rights of individuals to receive service.

2. Commitment to the Community (con't)

2.3 The orientation and mobility specialist should contribute to community education by defining the rule of orientation and mobility in the community, by describing the nature and delivery of service, and by indicating how the community can become involved in educational and rehabilitation process.

2.4 The orientation and mobility specialist should not engage in any public education activity that results in exploitation of his students. Exaggeration, sensationalism, superficiality and other misleading activities are to be avoided.

2.5 The orientation and mobility specialist should strive to remedy those deficiences in serives that exist in the community.

2.6 The orientation and mobility specialist should encourage and participate in agency or school accreditation.

3. Commitment to the Profession

3.1 The orientation and mobility specialist should seek full responsibility for the exercise of professional judgement related to orientation and mobility.

3.2 To the best of his ability, the orientation and mobility specialist should accept the responsibility throughout his career to master and contribute to the growing body of specialized knowledge, concepts and skills which characterize orientation and mobility as a profession.

3.3 The orientation and mobility specialist should interpret and use the writing and research of others with integrity. In writing, making presentations, or conducting research the orientation and mobility specialist should be familiar with and give recognition to previous work on the topic.

3.4 The orientation and mobility specialist should conduct his investigations in a manner which takes into consideration the welfare of the subject, and report research in a way as to lessen the possiblity that his findings will be misleading.

3.5 The orientation and mobility specialist should strive to improve the quality of his service and promote conditions which attract suitable persons to careers in orientation and mobility.

3.6 The orientation and mobility specialist should, whenever possible, support and participate in local, state and national professional organizations.

3.7 The orientation and mobility specialist should comply with professional practice in making known his availability for professional services.

3.8 The orientation and mobility specialist should accept no gratuities or gifts of significance over the above the predetermined salary or fee for professional service.

3.9 The orientation and mobility specialist should not engage in commercial activities which result in a conflict of interest between these activities and his professional objectives with the student.

3.10 The orientation and mobility specialist involved in development or promotion of orientation and mobility devices, books or other products, should present such products in a professional and factual way.

3.11 The orientation and mobility specialist should expose incompetence, illegal or unethical behavior.

3.12 The orientation and mobility specialist should strive to provide fair treatment to all members of the profession and support them when unjustly accused or mistreated.

3.13 Each member of the profession has a personal and professional responsibility for supporting the orientation and mobility code of ethics and maintaing its effectiveness.

4. Commitment to Colleagues and Other Professionals

4.1 The orientation and mobility specialist should engage in professional relationships on a mature level and should not become involved in personal disparagment.

4.2 The orientation and mobility specialist should communicate fully and openly with his colleagues in the sharing of specialized knowledge, concepts and skills.

4.3 The orientation and mobility specialist should not offer professional services to a person receiving orientation and mobility instruction from another orientation and mobility specialist, except by agreement with the other specialist or after the other specialist has ended his work with the student.

4.4 When transferring a student, the orientation and mobility specialist should not commit a receiving specialist to a prescribed course of action. The receiving specialist should take the student's former training into consideration when developing a continued plan for training.

4.5 The orientation and mobility specialist should seek harmonious relations with members of other professions. This should include the discussion and free exchange of ideas regarding the overall welfare of the student and discussion with other professionals regarding the benefits to be obtained from orientation and mobility services.

4.6 The orientation and mobility specialist should not assume responsibilities which are better provided by other professionals who are available to the student.

4.7 The orientation and mobility specialist should seek to facilitate and enhance team effort with other professionals. In such situations where team decisions are made, the orientation and mobility specialist should contribute information from his own particular perspective and should abide by the team decision unless the team decision requires that he act in violation of the code of ethics.

5. Commitment to Professional Employment Practices

5.1 The orientation and mobility specialist should apply for, accept, or offer a position on the basis of professional qualification and should conduct himself with integrity in these situations.

5.2 The orientation and mobility specialist should give prompt notification of any change of his availability to the agency or school where he has applied.

5.3 The orientation and mobility specialist seeking to hire other specialists should give prompt notification of change in the availability or nature of a position.

5.4 The orientation and mobility specialist should respond factually when requested to write a letter of recommendation for a colleague seeking a professional position.

5.5 The orientation and mobility specialist should provide applicants seeking information about a position with an honest description of the assignment, conditions of work, and related matters.

5.6 The orientation and mobility specialist should abide by the terms of a contract or agreement whether verbal or written, unless the terms have been falsely represented or substancially changed by the other party.

5.7 The orientation and mobility specialist should not accept positions where proven principles of orientation and mobility practice are compromised or abandoned, unless he accepts the position with the intention of amending or modifying the questionable practices and providing that he does not participate in the behavior which violates the code of ethics.

5.8 The orientation and mobility specialist should adhere to the policies and regulations of his employer except where they require him to violate ethical principles indicated in this code. To avoid possible conflicts, the orientation and mobility specialist should acquaint his employer with the contents of this code.

5. Commitment to Professional Employment Practices (con't)

5.9 The orientation and mobility specialist who intends to resign from his position should give his employer sufficient advance notice and leave his work in such a way as to allow his successor to continue effective service.

5.10 The orientation and mobility specialist may provide additional professional service through private contracts as long as these services remain of the highest quality and do not interfere with the specialist's regular job duties.

5.11 The orientation and mobility specialist should not accept renumeration for professional instruction from a student who is entitled to such instruction through an agency or school unless the student, when fully informed of services available decides to contract privately with the specialist.

5.12 The orientation and mobility specialist should establish a fee for private contracting in cooperation with the contracting agency or school that is consistant with the reasonable and customary rate of that particular geographic region.

5.13 When providing additional service through private contracts, the orientation and mobility specialist should observe the agency or school's policies and procedures concerning outside employment including the use of facilities.

Above is the Code of Ethics for Orientation and Mobility Specialists. The code in its present form, represents the combined input of orientation and mobility specialists throughout the field. The principles in the code were first formulated in reaction to questionnaire responses obtained from practitioners. The questionnaire presented many ideas and asked each respondent to state and define what he or she would like included in the code. In addition, the questionnaire asked for critical incidences of unethical behavior from which principles could be developed. From these sources of information, the first draft of the code and accompanying enforcement procedures were written. The draft later was circulated in the Long Cane News inviting additional feedback from the field. On July 22, 1973, at the AAWB Interest Group #9 meeting in Cleveland, the code and enforcement procedures were presented and discussed with the membership. At that time, further revisions were made.

Finally on July 25, 1973, at the business meeting of Interest Group #9, the code and enforcement procedures were voted upon. At this assembly, the code was adopted while the enforcement procedures were defeated. It was felt that further study of the legal implications of the enforcement procedures were necessary before the procedures could be adopted. To further explore the legal questions, Frank Ryan, Chairman of Interest Group #9, has requested the Code of Ethics Committee to continue study and development of the enforcement procedures and report to the Interest Group during the 1975 Convention.

Report of Ad Hoc Committee on Mobility Aides

The members of Interest Group IX of A.A.W.B. commissioned me as Chairman to investigate the question of "Mobility Aides" at the conclusion of the 1971 AAWB meeting held in Richmond, Va.

The following committee was appointed:

Mr. Russell Williams, Chairman
Mr. Robert Scheffel
Mr. James Kimrbough
Mr. James Cordell
Mr. Tony Manuele
Mr. Kent Wardell
Mr. Bob Bryant
Mr. Robert Crouse, ex-offico

The committee decided not only to look at the question of mobility aides but of mobility personnel at selected agencies who had established programs in these areas.

The committee prepared a survey entitled "Survey of Non-University Training Programs for Orientation and Mobility Personnel."

The Ad Hoc Committee on Mobility Aides hopes that these facts will enable the members of Interest Group IX to more clearly understand the issue of agency trained mobility personnel.

In addition to those programs included in the survey it has since been learned that at least two other institutions are also considering training their own instructors. We have no facts to give you on these institutions or what their purported programs would be.

The Ad Hoc Committee offers the following recommendations.

(1) The concept of a rehabilitation or mobility aide may well be valid one and would perhaps supply the field with needed paraprofessionals to enable us to better serve blind persons. However, we should first have a clear indication as to number of persons needed in this area (2) We also feel that paraprofessional programs should be formally organized and have definitive goals, objectives, and functions. (3) Interest Group IX, should strive to establish its own guidelines as to the training and functioning of paraprofessionals within the field of orientation and mobility.

(4) The question of agency trained mobility instructors is another matter. While the committee was able to gather information from agencies training mobility instructing it felt that it was not possible to complete an in-dept evaluation of any agency in order to asses the efficacy of their programs or program products.

(5) While several agencies were willing to co-operate in this matter it should also be pointed out that Interest Group IX does not have the power to control the training of personnel in any agency. We can only encourage agencies to adhere to the highest possible standards in delivering orientation and mobility to blind persons.

Hopefully, as the number of graduates from university level program increases and begins to meet the demand for instructors that agency training programs will cease.

We cannot recommend at this time that Interest Group IX consider certifying agency trained personnel in mobility. We do not have the resources or machinery by which to implement such procedures.

Ths concludes the Ad Hoc Committee Report on Mobility Aides.

Respectfully Submitted;

Russell Williams, Chairman
Robert Scheffell
James Kimbrough
James Cordell
Tony Manuele
Kent Wardell
Bob Bryant
Robert Crouse, ex-offico

RESULTS OF SURVEY OF NON-UNIVERSITY TRAINING PROGRAMS FOR ORIENTATION AND MOBILITY PERSONNEL

BY

ROBERT CROUSE

I. Agencies Surveyed

1. Cleveland Society for the Blind (CSB)
2. Greater Pittsburgh Guiid for the Blind (GPGB)
*3. Braille Institute (BI)
4. Industrial Home for the Blind (IHB)
5. Virginia Commission for the Visually Handicapped (VCVH)
6. Arkansas Enterprises for the Blind (AEB)

*Braille Institute did not respond with any information.
(Editor's note - It is my understanding that the Braille Institute is not training their own O & M personnel at this time.

II. Responses to the survey items

Item #1 - Name of organization and officials

Item #2 - Cite the reasons why your agency is training non-university level orientation and and mobility personnel.

CSB - "Because of marked shortage."

GPGB - "To maintain and guarantee the availability of trained O & M Specialists to meet the needs of clients served by The Greater Pittsburgh Guild for the Blind."

IHB - "Historically, since the start of its mobility training program for the blind, about the year 1950 IHB has used as its own mobility instructors personnel with at least a bachelor's degree in Physical Education or Physical Corrective Therapy. In addition, we have also employed people with masters degrees in Physical Education and would be willing to hire a person with a masters in Orientation and Mobility.

It has been our feeling that such a person had the best basic education for working as mobility instructors, as we see mobility training falling largely within the field of physical corrective therapy.

Since the IHB was one of the only agencies in the country providing mobility training for blind persons during 1950's, we were frequently asked by other agencies to train their staff to be mobility instructors.

After the start of the graduate level mobility programs in the early 1960's we continued to provide this service to those agencies who saw fit to sent trainees to our mobility course for professionals."

VCVH- "The major purpose of the Rehabilitation Aide Project is to test the feasibility if utilizing trained paraprofessionals to provide specified Orientation and Mobility and Rehabilitation Teaching services to selected visually handicapped individuals especially those who may be geriatrically blinded."

AEB - "To meet needs of other agencies; To meet own needs, when unable to recruit degreed personnel."

Item #3 - What Type(s) of training program (s) do you offer for mobility personnel?

A. Level of Training: Mobility Aide - GPGB
VCVH

Mobility Instructor - CSB
GPGB
IHB
AEB

B. Objectives of your training program

CSB - "To have a fully competent instructor."

GPGB - "To maintain and guarantee the availability of trained O & M Specialists to meet the needs of clients served by the GPGB."

IHB - "Train mobility instructors for IHB and other agencies."

VCVH - "The dual objectives of the Project are: (1) to test the feasibility of utilizing trained paraprofessionals to provide selected Orientation and Rehabilitation Teaching services to selected visually handicapped individuals, especially those who may be geriatrically blinded and (2) to provide employment for individuals who may be unemployed, underemployed or, in some manner culturally deprived.

AEB - "To train competent mobility aides: To meet needs of large segments of

blind population."

Item #4 - Title of your trainees upon completion of their training.

CBS - (mobility) "instructor"
GPGB - (1) Orientation and Mobility Specialist
(2) Orientation and Mobility Aide
IHB - Mobility Instructor
VCVH - Rehabilitation Aides
AEB - "Left up to agencies involved"

Item #5 - Number of trainees who have completed training program to date.

CSB - 8
GPGB - (1) Instructor - 19
(2) Aide - 17
IHB - 50
VCVH - 9 (projected final dates March and June, 1973)
AEB - 25

Item #6 - Number of trainees currently in training in your program.

CSB - 0
GPGB - none
IHB - 1
VCVH - 9 (same nine as in item #5)
AEB - 1

Item #7 - Number of former trainees who have returned to college level training programs.

CSB - 3
GPGB - 2
IHB - unknown
VCVH - 0
AEB - 2 known, generally unknown

Item #8 - Number of former trainees who are still involved with work for the visually handicapped.

CSB - 5
GPGB - (1) Instructors - 16
(2) Aides - 10
IHB - unknown
VCVH - 0, no graduates yet
AEB - unknown

Item #9 - Describe scholastic and personal requirements you use in the selection of trainees for admission to your program.

CSB - "Preferably some college, demonstrated ability to teach and the ability to relate to the organization as well as clients.

GPGB - (1) Bachelor's degree
(2) Visual acuity between 20/40 and 20/20 in the best eye with best correction and have a contiguous visual field no less than 160 degrees.
(3) Have normal hearing in the best ear with best correction.
(4) Possess no physical disabilities which might jeopardize the safety of the blind person.
(5) Some work experience preferred, although not necessarily in area of blindness.

IHB - We have had prospective instructors referred to us for training without professional backgrounds in physical education, who, evidently, based on the reports

we received, turned out to be good instructors. These, generally, have been individuals with training or fairly extensive experience related to physical education. We also have had a few trainees referred to us for training who fell within the legal classfication of "Blind". We understand that some function effectively and safely.

We require a sufficiently complete resume of the training and background of the professional trainee, to permit our staff to gear their instruction, so far as possible, to the interests and special knowledge of each professional trainee. We also require a medical report, indluding blood serology and urinalysis, which will provide assurance that the trainee is free of communicable diseases or from any condition that might be aggravated by physical exercise.

VCVH - (1) A high school diploma or its equivalent.
(2) 3 years expreience, paid or unpaid, in which the ability to function successfully in a helping capacity with children or adults, on either a group or an individual basis, has been demonstrated (organized church activities, etc.)
(3) Age and physical condition must not interfere with the performance of certain physical tasks related to job function.

AEB - (1) Sponsorship by outside agencies, public or private who employed them.
(2) Bachelor's degree in social science, education, physical education, related field.

Item #10 - What is length of time required to complete your program?

CSB - Six months
GPGB - (1) instructors - six months
(2) unstated
IHB - six weeks, 210 hours
VCVH - six months.
AEB - six months.

Item #11 - Curriculum

CSB - No information included as to curriculum
GPGB - 8 weeks (320 hours) of lectures and blindfold.
15 weeks (600 hours) of internship.
IHB - 55 hours of lectures. 155 hours of blindfold and internship.
VCVH - 194 hours of lectures. 48-96 hours of blindfold.
480 hours (3months) intership.
AEB - 95 hours lectures. 135 hours of blindfold. 381 hours of intershipd. 285 hours of observation.

Item #12 - Do you train mobility personnel on a fee basis for other agencies?

CSB - no
GPGB - Yes (3 have completed training)
IHB - Yes
VCVH - No
AEB - Yes

Item # 13 - What type of positions and related duries have your trainees fulfilled upon completion of your program?

CSB - Teachers of mobility
GPGB -Teaching mobility and mobility related courses
IHB - Mobility instructors
VCVH - No graduates as yet
AEB - Unknown to us from other agencies. Mobility aide or instructor.

Item #14 - Have you observed any discrepancies between intended job functions and actual job functions of your trainees working in the field?

CSB - No
GPGB - No
IHB - No, as far as we can determine
VCVH - No graduates
AEB - In one known instance.

Item #15 - How is your program funded?

CSB - agency budget
GPGB - By agency budget
IHB - By fees received for the courses
VCVH - New careers in Rehabilitation, SRS, HEW
AEB - Fee basis from other agencies, plus AEB scholarships; part of on-job training for staff members.

Item #16 -Describe any changes you can foresee in your program.

CSB - Non
GPGB - As number of trained mobility specialists increases, the number of guild trained instructors should decrease.
IHB - At the present time we foresee no changes in our program.
VCVH - Changes in program elements, continuance beyond 1976 dependent upon results of project.
AEB - Perhaps ending when B.A. and M.A. programs turning out ample numbers to meet demand.

Item #17 - Would your agency be willing to participate in an onsite review by a team from Interest Group IX of your training program (5) in mobility?

CSB - No, interest group IX has no accrediting status.
GPGB - Yes
IHB - As we are an agency fully accredited by N.A.C., we would welcome an opportunity to discuss our program with anyone in the field.
VCVH - Not only favorable to such a possiblility, but in fact, encourage it.
AEB - Yes.

SUMMARY OF SURVEY - MOBILITY AIDES

	AEB	CSB	GPGB	IHB	VCVH
1. Type Program	Aide (Instructor)	Instructor	Instructor and Aide	Instructor	Aide
2. Title of Graduate	Up to Agency	Instructor	Mobility Specialist	Instructor	Aide
3. Admission Requirements	a) AEB-B.A. b) Outside-no educ. requirement, agency sponsorship	B.A.	B.A. Vision Hearing Physical	no education requirements	H.S. grad. work experience (general)
4. Length of Training	6 months	6 months	6 months	6 weeks	6 months
5. Curriculum:					
a. Lectures	95 hours	no curriculum information given	320 hours combined	55 hours	194 hours
b. Observation	285 hours	- - - -		?	?
c. Internship	381 hours	- - - -	600 hours 15 weeks	155 hours Combined	480 hours (3 months)
d. Blindfold	135 hours	- - - -	Included in #a.		48-96 hours
6. No. prev. trained	25	8	19 Inst. 17 Aides	50	9
7. No. currently trained	1	0	0	1	9 (same as #6)

SURVEY OF NEED FOR ORIENTATION AND MOBILITY PERSONNEL

John R. Eichorn, Hugo R. Vigoroso: Division of Special Education and Rehabilitation, Department of Education, Boston College, Chestnut Hill, MA 02167

To assist in deliberations regarding the preparation of and need for orientation and mobility personnel, a survey was conducted during the period of July, 1974 to October, 1974. A questionnaire was mailed to approximately 780 organizations which appear in A.F.B.'s Directory of Agencies Serving the Visually Handicapped in the U.S.; there was a return of approximately 36%.

Included in the summary for each question is the number of respondents to that particular question. Within the parenthesis immediately following the number of respondents are two percentage figures; the first one relates the total organizations surveyed (TOS) and the number of respondents to that particular question; the second one relates the total respondents (TR) and the number of respondents to that particular question.

It might be interesting to note that in the December 1974 issue of the New Outlook there appears an article entitled "Manpower Needs in Orientation and Mobility." Although independently administered, the pattern of responses evidenced in that survey which was conducted in 1973 and the Boston College survey seem to be fairly consistent. It is suggested, however, that the data enclosed for questions 7,9 and 10 indicate several important additional dimensions with regard to the preparation and responsibility areas of orientation and mobility personnel (Orientation and Mobility Specialist; Peripatologist.)

Summary of Survey

Q1. "Population currently being served by your organization"

"Total Number": of the 240 respondents (31% TOS; 85% TR), there was a clear majority (161) serving a population of 1000 or less; the breakdown of this group was 66 organizations serving 100 or less, 76 organizations 101-500 and 19 organizations 501-1000.

"Age Range": of the 240 respondents, there was a clear majority designating a range which included ages 65 or 65+. Ages 0-65/65+, 78 organizations; ages 19-65/65+, 15 organizations.

Q2. "Does your organization offer orientation and mobility services?"

Of 225 respondents (33% TOS; 90% TR), 167 offer orientation and mobility services (O & M); in several cases the respondent indicated that services were offered on an indirect or contractual basis. Of the 77 who indicated that O & M services were not offered, 31 stated that if possible they would include such services in their program.

Q3. "How many orientation and mobility personnel...on staff?"

The 188 respondents (24% TOS; 66% TR) indicated that they presently have 393 full time O & M personnel on staff and 83 part time.

Q4. Of the 83 part time O & M personnel designated in Q3, the respondents indicated 10 had no other duties and the remainder suggested a variety of other duties; e.g. counseling, ADL, physical education, communications (braille, typing, etc.).

Q5. "...how many additional orientation and mobility personnel could you use..."

The 188 respondents (24% TOS; 66% TR) indicated a need for approximately 300 additional O & M personnel to meet their current case load and projected a need of approximately 430 additional O & M personnel over the next five years.

note: there appeared to be evidence that some respondents included their current need in their projected need, therefore the number they indicated as projected was cumulative and not additive in which case in taking an extreme conservative stance, the total need could be 430 and not 730 (300 current, 430 projected).

Q6. "With what population do/would the orientation and mobility personnel work?"

There were 156 respondents (20% TOS: 55% TR) to this question; 25 of these respondents included data (percentages, non-quantitative, different category groupings) that could not be included in the chart as shown.

	Children			Adults	
	0-5	5-14	15-18	19-65	over 65
Adventitious					
Totally Blind.	93	514	644	4434	5516
Partially Sighted.	319	286	1581	7107	5874
Congenital					
Totally Blind.	399	735	756	1699	407
Partially Sighted.	1004	1375	1013	1924	1074
TOTAL	1815	2910	3994	15164	12471
Multiply Handicapped*					
Adventitious	206	635	508	3905	5466
Congenital	1203	2163	1491	2557	937
TOTAL	1409	2798	1999	6462	6403

*of the numbers shown above, how many do you classify as multiply handicapped?

Q7. "Does/would your organization need...an individual...fully qualified and has professional preparation (certifiable) in...paired disciplines?"

There were 177 respondents (23% TOS; 63% TR) to this question; the vast majority indicated a need for personnel competent in "paired disciplines" the most common of which were:

	On Staff	Needed
O & M and Rehabilitation Teaching	88½	160
O & M and Teacher of VH	117	103
O & M and Vocational Counselor	36	46

Q8. "What...preferred preparation for orientation and mobility personnel on your staff?"

There were 188 respondents (24% TOS; 66% TR) to this question; the major groupings were:

1.	Masters Degree	75
2.	Baccalaureate Degree	41
3.	Masters and/or Baccalaureate	28
4.	Baccalaureate and/or agency program	16
5.	Program offered by agency	8
6.	Masters and/or agency	6

Q9. "...services offered by orientation and mobility personnel...applicable to individuals who are not visually handicapped?"

There were 172 respondents (22% TOS; 61% TR) to this question of which approximately 50% indicated "No" and 50% indicated "Yes". The most common categories indicated

by those responding in the affirmative were (total is beyond 172 because of multiple areas identified by individual respondents):

1.	Mentally Retarded	39
2.	Physically Impaired	17
3.	Deaf	13
4.	Elderly	13
5.	Other Professionals	13

Q10. "...your thoughts regarding what the competencies should be of orientation and mobility personnel on your staff?"

The 150 respondents (19% TOS; 53% TR) indicated a wide variety of ability areas and personal qualifications. We attempted to categorize the individual responses and have listed those that were the most frequently indicated.

Personal Qualifications

1.	ability to relate (to staff, students, parents, etc.)	31
2.	flexible	11
3.	patient	15
4.	dedication	6
5.	empathy	5

The remaining traits were significantly scattered but included such qualities as: ethical, good judgment, warm, sensitive, cooperative, mature, reliable, creative.

Ability Areas

1.	Skills in O & M (Principles, concept formation, body image, etc.)	54
2.	Psycho-social development and adjustment (psychology of disability, needs of the Visually Handicapped, etc.)	40
3.	Individualize lessons (assess, analyze, prescribe, etc.)	30
4.	Teaching ability/ability in another teaching teaching field (general education, special education, learning disabilities, etc.)	29
5.	Perceptual-motor training (movement education, physical education, sensory training, etc.)	22
6.	Eye diseases/low vision	21
7.	Counseling	18
8.	Multi-handicapped blind	16
9.	Skills of daily living (home and personal management)	15
10.	Report writing/record keeping	8
11.	Delivery of in-service training	8
12.	Knowledge of working with elderly	7

MOBILITY RESEARCH
AT THE EASTERN BLIND REHABILITATION CENTER

W. De l'Aune and W. Needham: EBRC and Psychology Service, VA Hospital, West Haven, CT 06516

Ambient Acoustic Cues Used by Blinded Veterans in Lateral Object Detection. Through utilization of a methodology for quantitatively assessing the performance of blinded veterans in a specific acoustic environmental analysis task, various physical and psychological parameters possibly affecting the veteran's performance were examined. The paradigm described by De l'Aune et al. (1974), which quantifies performance in detecting lateral openings (intersecting hallways) was used throughout this series of experiments.

Because the high frequency components of human hearing are usually considered more important than middle or low frequency components in obstacle detection tasks, and this range is normally impaired with age, a comparison of the performances of blindfolded high school students and blinded veterans was undertaken. No significant differences in performance between veterans and high school students were found, and no significant correlation with the age of individual veterans and their performance was seen. Pure tone audiometric testing also indicated no significant relationship for any tested frequency and performance in the experimental task (De l'Aune, Gillispie, Scheel, 1974). This data, along with the physical acoustic analysis of the cues present in the test environment, which indicated unseeable spectral intensity cues at frequencies lower than 1 KHz, strongly implies that high frequency hearing capabilities are not a necessary condition for successful obstacle detection of this type (De l'Aune, Needham, Scheel, Gillispie, 1974). This finding has obvious ramifications in the acoustic training of older visually impaired individuals.

An examination of the performance data and information concerning the extent of the visual impairment, educational level and Wechsler Adult Intelligence Scale verbal IQ indicated no significant relationships (De l'Aune, Gillispie, Scheel, Carney and Needham, 1974). Striking correlations between performance and Minnesota Multiphasic Personality Inventory (MMPI) and California Psychological Inventory (CPI) scale were found, with results indicating that blinded veterans who perform better in the experimental task exhibit more adequate emotional and interpersonal adjustment. The MMPI scales related to performance and Schizophrenia, all negatively correlated at significant level. The CPI scales of Well being, Achievement via Conformance and Intellectual Efficiency were found to be significantly correlated in a positive fashion to performance (De l'Aune, Needham, Scheel and Lerner, 1974).

A training technique in which discrete acoustic samples, recorded through the use of an artificial head in the actual test environment, were presented to blinded veterans in a two-alternative forced choice comparison task was evaluated. A significant improvement in performance after 300 seconds of training was observed (De l'Aune, Scheel and Needham, 1974). This training methodology will undergo further evaluation. An artificially filtered noise analog of those tapes is currently displaying even greater success in both training efficiency and audiological "predictiveness" of task performance (Bauer, De l'Aune, Needham, 1975).

A national conference on ambient acoustic cues for obstacle detection in blind mobility, sponsored by the American Foundation for the Blind and hosted by the EBRC, was held on November 14-15, 1974. Drs. De l'Aune and Needham of the EBRC discussed the psychoacoustic and psychometric research in this area currently underway at the West Haven Center. Dr. David Perrott (California State University at San Diego) covered the psychoacoustic aspects of spectral shape difference detection, Dr. Arthur Niemoller (Central Institute for the Deaf, St. Louis) discussed related architectural acoustics, and Dr. Donald Harris (Chief, Audiology Research, U.S.N. Submarine Base, New London) discussed training methodologies. Also attending this were Mr. George Gillispie, Dr. Gregory Goodrich, Mr. Howard Frieberger, Dr. Milton Grahm, Mr. Leslie Clark, Dr. Robert Robinson, Mr. Rembert Aranda, Dr. Derek Rowel, Dr. Gustav Haas, Dr. Peter Comalli, Ms. Kathryn Gillispie, and Dr. Newman Guttman. The proceedings of this conference are in the process of being transcribed and will be available in the near future.

Work is being continued in this area with added emphasis being placed upon the duration of training effect and the generalizability of performance increments to other environments. The psychoacoustic parameters of detecting intensity changes in narrow frequency areas of broad band noise backgournds are also being investigated. Expansion into the area of parallel traffic cues is also underway.

Velocity and Veer. This area of study was initially concerned with two problems. The first was methodological in nature and was involved with the need of a technique to measure the extent of veer from a straight path, with ongoing correction capabilities, for future use in evaluating acoustic training procedures utilizing parallel traffic cues to improve outdoor mobility performance. Second, it has been anecdotally noted that velocity of travel appeared to be negatively correlated with the amount of veer in sightless travel. It was therefore decided that the technique proposed to measure the extent of veer could be used to ascertain if this anecdotal information was correct.

Sixteen subjects, all having experience with some travel without sight, were blindfolded and asked to walk a 50 foot straight path bounded laterally by ropes positioned at a height of 3 feet and spaced 3½ feet apart. The time to traverse one direction of the course and the number of rope touchings were recorded. Each subject was required to walk the route 10 times. The subjects were to align themselves with the rear wall surface before the start of each trial, and were restrained from impact with the final wall surface by an experimenter.

A correlation coefficient for the 160 trials was calculated and a positive relationship between time of travel and number of rope touchings was found to be significant at the .01 level of probability. This would support the previous observations that velocity of travel was indeed inversely related to the extent of veer. The age of the subjects was significantly correlated with time of travel but not with the number of rope touchings (the older subjects tended to walk slower). In terms of learning, mean time of travel for each trial and mean number of rope touchings for each trial were negatively correlated with the numerical order of the trials at a significant level. This finding would support the applicability of this methodology as a training tool to increase the efficiency of straight line travel in the blind (De l'Aune and Kevorkian, 1974).

An additional analysis was done on personality scale scores of the subjects and the velocity/veer performance. With MMPI, both in terms of specific scales and overall direction of the correlations, results indicated that velocity and veer in straight line travel of the blinded veterans were related to the presence of emotional and behavioral pathology, with more disturbed individuals traveling slower and making more veering errors. The relationships between velocity and MMPI test scores were stronger and more numerous than those between veer and this personality measure. Highly significant with both mobility measures, however, were the positive relationships with Sc, a scale associated with emotional isolation, nonconformance, withdrawal, anxiety and internal conflicts, and Si, which denotes introversion, shyness, social ineptness and avoidance of social activity. A highly siginificant negative relationship and relationship which approached significance between K and the two mobility measures suggested a lack of adequate defenses and/or willingness to acknowledge personality weakness in the slower, more veering subjects. In contrast, an absence of relationship between both and experimental variables and L, Mf, Pd, and Ma was noted (De l'Aune, Needham, and Kevorkian, 1975).

Whereas the MMPI variables were significantly related to both velocity and veer, expecially velocity, the CPI correlated only with the measure of veer, five of its eighteen scales being statisfically significant. However, the overall pattern of relationships with the majority of the correlations being negative, suggested that positive personality characteristics as a whole are inversely related to poor performance, as with the MMPI. (Unlike the MMPI, high scores on the CPI was, on the whole, relatively less related to mobility measures than the MMPI may reflect its emphasis upon the aspects of normal function rather than psychological pathology (Needham, De l'Aune and Kevorkian, 1975).

One is tempted to employ the term "dysfunctional overflow" to explain the results of this set of experiments and other studies successfully relating personality characteristics to diverse tasks such as the detection of open and closed spaces using ambient sounds, comprehension of compressed speech (De l'Aune, Needham, Lewis and Nelson, 1975), and successful acquisition of Optacon reading skill (Gadbaw and De l'Aune, 1974). In the absence of a relationship with physiological and sensory characteristics such as age, and general intelligence, MMPI and CPI scales were consistently correlated with performance measures of blinded veterans who were admitted to a residential adjustment center. Whether dysfunctional overflow is present in other visually impaired groups must be determined by future studies.

It is axiomatic in clinical work that an absence of structure allows greater opportunity for the expression of emotional states. Blindness, with its reduced information input, blurring or absence of a figure-ground relationship, and minimal feedback data, expecially in individuals recently affected, qualifies as an example of this phenomenon. The blind individual's world could be, in a sense, like the sighted client's amorphous inkblot, allowing for psychological pathology to be displayed in a wide range of behavior. If this assumption is correct, than psychological treatment should be made a part of the rehabilitation of a client who is having difficulty with a variety of presumably unrelated facets of his daily life.

Evaluation of Parameters Affecting Successful Prism Use by Veterans with Visual Field Restrictions. The use of high powered press-on Fresnel prism lenses to displace objects toward the patient's useable field of vision so that he may detect their presence significantly sooner than otherwise, is becoming more and more common. The purpose of this project is to evaluate various factors possibly involved with successful prism use by visually impaired veterans. Factors such as prism power, placement of prism, lens prescription, age, sex, education level, acuities, visual pathology, and psychological data will be examined for possible relationship with functional improvements resulting from the use of prisms. Early analysis indicates a significant positive relationship between personality traits concerning Flexibility and Tolerance and successful prism use. The age of the subject is also significantly related to success, with younger veterans reaping greater benefits from the optical systems.

Evaluation of Sensory Aids. Because of space restrictions no attempt will be made to itemize all of the sensory aids that are evaluated by the center. This important category of research would include optical and electronic aids currently available in either prototype or commercial form. These devices are examined by relevant staff members and specific patients who might have potential use for such aids. Subjective comments are solicited from both groups and in many cases the devices are issued to selected patients who in turn provide feedback to the research department as to the utility of the items in actual daily living circumstances. If warranted, the aid is then subjected to more rigorously structured evaluatory procedures.

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REVIEW OF UNIVERSITY PROGRAMS FOR THE PREPARATION OF ORIENTATION AND MOBILITY SPECIALISTS (PERIPATOLOGISTS)

Within the past year there have been numerous changes in staffing and curricula of university training programs for orientation and mobility personnel. In this issue of the Newsletter we are publishing an up-to-date review of these programs. You might find such information useful to you in giving accurate information to persons interested in pursuing a career in orientation and mobility. Empahsis has been placed on the features of each program which distinguish it from the others. Each program was described by a staff member related to that program.

Boston College, Division of Special Education and Rehabilitation, Chestnut Hill, MA 02167

Program The Peripatology Program at Boston College was involved in a curriculum study project during the 1973-74 school year. The revisions evolving from this study have resulted in a program having a special education - rehabilitation base, attending to the needs of multiply handicapped visually impaired persons of all ages, as well as those with a single, visual impairment. The organization of the curriculum allows students to opt for a single program of study or a combination; i.e. Peripatology and/or Educator of the Visually Handicapped and/or Educator of the Multiply Handicapped. This allows an individual to prepare for the varied needs of the service delivery system.

We are fortunate to have available in the Metropolitan Boston area the variety of facilities and populations needed to contribute to the field experiences required in the programs of study stated above. The variation of environs and modes of study stated above. The variation of environs and modes of public transportation within short distances of Boston College is a definite advantage to students. Some of the variations are suburban, urban and rural living area; four weather seasons; surface, subway and above surface transportation systems; residential, commercial, industrial zones; etc. We also have a Sensory Aids Institute for experienced instructors of orientation and mobility.

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W. Robert Smith	- V.A. Hospital, Hines, Illinois, 1954-64.
Hugo R. Vigoroso	- Boston College, 1962.

California State University, Orientation and Mobility Training Program, Department of Special Education, 5151 State University Drive, Los Angeles, CA 90032 Currently our program staff consists of Mr. Robert A. Eisenberg, Director and Instructor, and Mr. Kent Wardell, Instructor. We are both graduates of W.M.U. At present we are using some part time service from Mr. Terrance Clark (W.M.U.) and Mr. Frank Ryan (B.C.).

Our program is a 12 month program primarily funded by the Rehabilitation Services Administration of HEW. Graduates qualify for a Master's Degree in Special Education and for the California Credential for Teachers of the Visually Handicapped in Mobility (Restricted). The program has a training capacity of 12 trainees per year and accepts three in each of the four quarters. The University is on a year-round, full four quarter system.

The first quarter mobility curriculum is characterized by blindfold training totalling 70 hours plus weekly lecture sessions on mobility subjects. Additionally, each student takes an observation course (4 hours per week) in which he is required to observe professional mobility services in community agencies. On trial at present as an elective is a course in Adaptive Living Skills for the Visually Impaired, which deals with personal care, hygiene, cooking and cleaning techniques.

The second quarter mobility curriculum consists of 10 to 15 hours per week of supervised field experience teaching mobility to one or two blind school youth or prevocational training center clients. The emphasis is on work with congenitally blind, total or near totally blind. Supervision is maintained at an average of 50%. In addition group seminars respond to the interest and concerns for review or in depth discussion of problems occurring in the field, and philosophies, strategies, methods or materials for remediating the problems.

The third quarter's mobility experience is structured to provide a varied teaching experience yet permit progression through teaching all skills. Additional lecture subjects on mobility are presented.

In addition to the above all students are required to take a course in which they are exposed to educational service programs and 40-60 hours of teaching O & M to multihandicapped children.

The fourth quarter in this program is a full-time internship at the Western Regional Blind Rehabilitation Center of the Veterans Administration. At the Center the trainees teach from 250-450 hours. In addition they are exposed to the V.A. programs in Low Vision evaluation and training, training in the use of electronic mobility aids and V.A. research activities. The trainee completes a graduate project of his choice (with advisor approval). These projects range from experimental research to development of new instructional materials (films, tape-slide presentations, etc.) or reviews of literature in areas in which the student feels a need for further study.

In addition to the mobility curriculu, students must take a course on the Psychological, Sociological and Vocational Implications of Blindness and a course on the physiology and function of the eye. Also three core courses related to all Master's Degree programs in Special Education must be taken.

We make every effort to keep this program progressive with an effort to remain flexible to the needs of the field, the trainees and the client consumer. Input from these sources is regularly used to adjust the program, structure and content.

Cleveland State University College of Arts and Sciences, Department of Social Services, Cleveland, OH 44115 Cleveland State University in the spring of 1974 hired Dr. Richard Welsh and shortly afterwards Mr. William Wiener to restructure the undergraduate O & M teacher-training program with the goal of developing and implementing a comprehensive program. Orientation and Mobility at CSU is housed within the Social Service Department for the purpose of developing within its graduates an understanding of human behavior and a sensitivity to human needs. Since O & M is concerned with more than just the cognitive and motor aspects of the skills being taught, housing within Social Service which contains courses geared both to theory and practical application. They begin with a course which sensitizes them to the problems in society and looks at systems which deliver service to the individual. Students next take a course in social science inquiry which is designed to look critically at social problems and develop skills in evaluating research into their solutions. The next set of courses is designed to examine individual behavior and society through the theories of personality, growth and development, and social change. The students are then required to take either a course in rehabilitation or in aging. The students also take two courses which provide knowledge and develop skills in intervention techniques such as providing individual counseling and initiating and guiding social and institutional change. While taking the interventions courses the students have an opportunity of applying techniques being studied in a field practicum consisting of 200 hours of service.

Upon this social service base the students now begin their program in Orientation and Mobility with a two-credit screening course designed to provide them with an overview of

O & M while at the same time allowing the faculty to judge the individual's potential for entrance into this field. If accepted into the Blind Rehabilitation sequence, the student takes the following courses:
Physiology, Function and Diseases of the Eye
Psycho-Social Dynamics of Blindness
Services to Visually Handicapped Persons: History and Issues
Low Vision Utilization
Methods of Orientation and Mobility - (one-to-one blindfold instruction minimum of 75 hours under blindfold).
Foundations of Orientation and Mobility (teaching of orientation and mobility techniques to visually handicapped persons, 12-15 hours per week in agency, school or hospital settings under close supervision of a certified instructor)
Internship in Orientation and Mobility (full-time experience at an agency, school, hospital, or community setting)

While preparing to enter and while studying O & M the student is encouraged to take electives in courses which would contribute to the development of an O & M specialist. Courses in the following areas are emphasized: audiology; biology; education, psychology; sociology; social service.

Florida State University Divison of Professional and Clinical Programs, College of Education, Tallahassee, FL 32306

Staff: Purvis Ponder - Western Michigan University;
Jean Grogan - Boston College.

Our program offers the standard curriculum of: Braille, Social and Emotional Problems of the Blind, Rehabilitation of the Blind, Methods and Materials for Teaching the Visually Handicapped, Structure and Function of the Eye, Implication of Low Vision on the Educational Curriculum for the Visually Handicapped, Orientation and Mobility for the Blind (blindfold experience, seminars, etc.). In addition, our students are involved in course work and practicum experiences with the multihandicapped-blind and the Movement Science (Motor development) curriculum of the Physical Education Department on the university campus. The students are continually involved in closely supervised on and off-campus experiences with the visually handicapped during their junior and senior years, assuming more and more direct responsibility for teaching as their level of training progresses.

Hunter College of the City University of New York, Special Education, 466 Lexington Avenue, N.Y., NY 10017

Training orientation and mobility specialists for visually handicapped inner city residents.

Staff
Ferne K. Roberts - Acting Coordinator
Judith Rutberg - Part-time Coordinator and Principal Instructor; Boston College
Michael Petrizzi - Part-time Instructor; Boston College

Program The competency-based O & M training curriculum focuses on the needs of the inner city visually handicapped population, including the aged, multiply handicapped and disadvantaged. Factors in the urban environment, including traffic, transportation, street safety, community facilities and bi-lingualism are analyzed and used as the bases of adaptations for individual client instruction.

This program has received partial funding from SRS.

University of Northern Colorado, School of Special Education and Rehabilitation, College of Education, Greeley, CO 80639

Staff
Mr. David L. Kappan - Western Michigan University
Mr. John Ferraro - San Francisco State University

The University of Northern Colorado's dual-competency program prepares prospective teachers in both academic teaching for visually handicapped children and orientation/mobility teaching. Graduates of this program are equipped equally in both disciplines concurrently and, along with M.A. degree, receive from U.N.C. Special Education Endorse-

ment to teach academic skills and from the American Association of Workers for the Blind certification to teach orientation/mobility skills. The dual competency program involves five quarters of study (approximately fifteen months with minimum of 75 quarter hours). The preceeding statement pre-supposes that the student has previously earned teaching certification or that he/she will meet the course requirements to satisfy Professional Teacher Education in the M.A. degree program. If these deficiencies are to be made up at U.N.C., this will extend the enrollment beyond five quarters. The program consists of coursework in both disciplines concurrently--related seminars, observation experiences, field trips, some research, and supervised teaching assignments. Since the dual-competency program involves both academic teaching and orientation/mobility teaching as a unit, anyone interested only in orientation/mobility teaching is advised to contact other universities that offer such programs.

San Francisco State University, Department of Special Education, 1600 Holloway Avenue, San Francisco, CA 94132

Staff

Wurzburger, Berdell H. - Associate Professor of Special Education Program Coordinator, Physically Handicapped and Sensory Handicapped (Deaf and Hard of Hearing, Crippled or Other Health Impaired, Deaf/Blind, and Visually Impaired including Orientation and Mobility). B.S. - University of Illinois, 1949. M.A. - San Francisco State College, 1963. Hines V.A. Hospital Blind Section, 1953-58. Richards, Robert - Special Lecturer, Department of Special Education, M. Ed. - Boston College, 1964. Dornbusch, Helen Goodman, Instructor, Department of Special Education, M.A. - San Francisco State University, 1967.

Program Graduate program in the training of orientation and mobility (specialists) teachers. Applicants to the O & M Program at S.F.S.U. should be advised that the Department of Special Education requires that all M.A. candidates possess 24 semester units of behavioral science prior to admission to classified graduate standing. Psychology, sociology, and education are some of the course prefixes that we accept for the behavioral science requirement. Students are usually accepted in both the fall and spring semesters, plus the summer session period. The number of students enrolled in the program at one time is flexible, but it is usually 10-15.

To teach orientation and mobility in the public schools of California it is necessary to possess a valid California credential in Orientation and Mobility. The State of California has had a Restricted Credential Orientation and Mobility (Fisher) since 1968. This credential is being phased out in September, 1976. All requirements to receive the (Fisher) O & M credential must be fulfilled by September 15, 1976.

The new orientation and mobility credential (Ryan) that replaces the (Fisher) old O & M credential is now in effect. To be eligible to receive the O & M credential (Ryan), one must have in his/her possession when applying for our program an elementary or secondary credential or the new multiple subject or single subject credential (California) or receive such credential prior to doing the student teaching in the Orientation and Mobility Program.

If a person does not desire to teach in the public schools of California, he/she may still apply for our program and receive the Master of Arts Degree in Orientation and Mobility. Such applicants need only to have 24 semester units of behavioral science in their previous college academic program and a grade point average of 2.5.

More than half of our graduates are dually certified in Orientation and Mobility and Resource-Visually Handicapped.

All student teaching is accomplished within a forty-mile radius of the campus of San Francisco State University.

Stephen F. Austin State University, Social and Rehabilitation Services Education Program, Nacogdoches, TX 75961 Orientation and Mobility is one of our specializations available to the students in the Social and Rehabilitation Service Education program at Stephen F. Austin State University. Other specialty areas within this program are: Rehabilitation, Generalist, and Social Work. Although the student may choose to specialize in one of these

fields of study he will initially receive a very generic approach to disabilities which will enable him to more effectively deal with the broad range of individuals he will encounter in the helping services. A student that selects the specialization of Orientation and Mobility, for example, must also take a common core of courses that are required of all students in the Social Rehabilitation Service program. This provides the student with an opportunity to develop competencies in the other specializations. These common core courses are made up of 12 semester hours and consist of: SSV 290 (Introduction to Social Welfare and Rehabilitation Services), 381 (Methods and Techniques in Social Welfare and Rehabilitation Services), 381 (Methods and Techniques in Social Welfare and Rehabilitation Services) 390 (Psycho-Social Aspects of Physical and Other Disabilities), 380 (Education and Psychology) or 485, (Human Growth and Development). After completion of these courses, the students that are accepted in Orientation and Mobility will take 26 semester hours in this specialization. These courses involve, 325 (Psycho-Social Aspects of Blindness), 340 (The Eye, Its Function and Health)--this course is taught by a local opthalmologist in conjunction with an orientation and mobility faculty member, 341 (Methods of Communication for the Blind) 385, (Supervised Field Experience)--involving work directly with blind persons in the local community, university students who have visual impairments and in local public schools and MH/MR institutions. Direct supervision is provided by the university orientation and mobility faculty during this practicum. The final course required is an internship placement at a state or private rehabilitation center or in a residential school for the blind. Supervision is provided by master orientation and mobility specialists in these internship placements.

Due to the generic approach of the Social and Rehabilitation program, the majority of the orientation and mobility students take sufficient additional hours of electives in Rehabilitation to be able to graduate with a double specialization.

In addition to the 38 hours required to complete the Orientation and Mobility specialization, students take courses in Alcoholism and Drug Abuse taught by an SRS faculty member, a course in Audiology and possible Aural Rehabilitation from the Speech and Hearing program, the Exceptional Child and M. R. child from the Special Education program and Gerontology from the Sociology Department. Minors are most often completed in Sociology, Psychology, Physical Education, Special Education or other related fields.

The orientation and mobility student graduates with a B.S.E. in Education with a major in Social and Rehabilitation Services and a Concentration in Orientation and Mobility with frequently a second concentration in Rehabilitation or Social Work. After the general basic university requirements are completed the student can complete the Social and Rehabilitation Services major and Orientation and Mobility Concentration in a total of three semesters. Therefore, most students begin the orientation and mobility sequence their second junior semester. Ten students are accepted into the program each year, usually five during the fall semester and five during the spring semester.

Staff:

Bob Bryant - Western Michigan University 1967; Arkansas Enterprises for the Blind 1965-1971; Arkansas School for the Blind 1971-1972; Orientation and Mobility Instructor University of Northern Colorado, Summer 1972; Began at Stephen F. Austin August 1972.

William H. Bryan, M.A.. - Western Michigan University 1970; B.S.E. degree Teacher of the Blind and Partially Sighted, Northern Illinois University 1969; Wisconsin School for the Visually Handicapped 1971-1973; Trade Winds Rehabilitation Center, Gary, Indiana 1973-1974; Began at Stephen F. Austin January 1975.

University of Pittsburgh School of Education, Division of Specialized Professional Development, Program in Special Education, Pittsburgh, PA 15260 At the University of Pittsburgh, there is one program in the Education for the Visually Handicapped. Within this program, a selected number of students have the option of taking additional didactic course work and practica experiences to qualify as Orientation and Mobility Specialists. Those students selected for the option of O & M training begin their program in June, while the balance of the group begin in September. During that first summer, three O & M specialists are hired on a full-time basis to provide the initial blindfold experiences and the first foundation course. In September, the specialized course work and practica are continued along with the teacher preparation program. Spring term, the students participate in an O & M internship. All students have experiences in a city and county program as well as

a residential school. Upon completion of the program, the students receive Pennsylvania certification as a Teacher of the Visually Handicapped and qualify for A.A.W.B. Certification as an Orientation and Mobility Specialist.

Staff O & M:
Kathryn Daugherty, University of Pittsburgh, M. Ed., Ph.D. Candidate, Andrew Frazier, Western Michigan University, M.A., Audrey Smith, University of Pittsburgh, M. Ed.

Teacher Preparation:
Mary W. Moore, University of Pittsburgh, Ph.D.
Ralph L. Peabody, Wayne State University, Ed.D.

Western Michigan University, Center for Orientation and Mobility, Department of Blind Rehabilitation, College of Education, Kalamazoo, MI 49001 In 1961 the Center for Orientation and Mobility was established in the School of Education and on July 1, 1972, it officially became the Department of Blind Rehabilitation in the College of Education. Professor Donald Blasch, formerly the counseling psychologist, operational assistant, and Acting Chief of Hines V.A. Blind Rehabilitation Center, was appointed Director of the Center for Orientation and Mobility. When the Programs for Blind Rehabilitation (1963) became the Department of Blind Rehabilitation, Professor Blasch was appointed its Chairman, and remains in that capacity.

Mr. Stanley Suterko (Associate Professor) Assistant Director in charge of Orientation and Mobility since 1961, was formerly the Chief Mobility Instructor (14 years) at Hines V.A. Hospital prior to his appointment at W.M.U. Mr. Suterko has been an active consultant on the international level in the establishment of orientation and mobility program.

Mr. Lloyd Widerberg (Assistant Professor) joined the faculty in 1964, after having taught orientation and mobility for fourteen years at Hines Hospital.

Mr. Marvin Weessies (Assistant Professor) came to Western Michigan University in 1970 with four years experience. His previous employment was at the Grand Rapids Association for the Blind and for Sight Conservation.

New faculty members as of September 1974: Mr. Everett Hill (Assistant Professor) has had eight years experience in the field. The last four years were in the capacity of Instructor in the undergraduate Orientation and Mobility Program at Florida State University.

Mr. Robert LaDuke (Assistant Professor) has had ten years experience in the field. He taught at Northern Colorado University and Stephen F. Austin State University prior to his appointment at Western Michigan University.

Mr. William Walkowiak (Assistant Professor) came to W.M.U. with twelve years experience in the field. During the last ten years he was employed as Lecturer in the Peripatology Program at Boston College.

Curriculum

Hrs.	Course No.	Course Name
2	572	Community Agency Resources
2	590	Physiology & Function of the Eye
2	592	Ed. of the Blind and Partially Sighted
3	594	Principles of O & M
2	595	Intro. to Methods of Independent Mobility for the Blind
4	596	Practicum in O & M
2	597	Introduction to Cecutiency (Low Vision)
2	599	Cerontology
3	601	Intro. to Research in Education
2	692	Dynamics of Blindness & Rehabilitation
2	693	Counseling of the Blind
8	696	Internship in O & M
2	710	Independent Research

Other Programs:

596 (Summer) - Lansing School for the Blind DeKalb-N.W. Association for the Blind (V.H.)

712 - - Electronic Travel Aids (Certified Orientation and Mobility Instructors 6 Weeks)

Low Vision Clinic - - housed at the Michigan Rehabilitation Center for the Blind

Conclusion As indicated in the survey of personnel needs summarized elsewhere in this Newsletter and as indicated in the survey reported upon in the December, 1974 issue of the New Outlook, there continues to be a need for orientation and mobility personnel. The present state of the economy will affect the fiscal capability of the organizations in need to adequately satisfy that need, but, it might be that you could help us help you. Perhaps you could do or continue to do the following:

1. Community education by whatever means you do or can affect this, could include information about the contribution of O & M to the development or rehabilitation of a visually handicapped individual, and the professional personnel involved in the delivery of such service;

2. Guide individuals in their career choices, suggest exploration of any or all the university programs, "sponsor" or recommend particular individuals with special attention perhaps to those individuals whom you would like to have as a colleague and/or on your staff;

3. Inform the various universities and the A.A.W.B. Job Exchange (115 K Street, N.W., Washington, D.C. 20005) of openings available.

It would appear that if the service delivery organizations and university programs informally developed a cooperating network, the personnel needs might be more satisfactorily attended to and the scope and quality of services expanded, all resulting in greater benefits for visually handicapped individuals.

ORIENTATION AND MOBILITY INSTRUCTORS TRAINING IN AUSTRALIA

James S. Liska, National Guide Dog and Mobility Training Center, Chandler Highway, Kew Victoria, Australia, 3101

Following a survey visit by Professor Suterko to Australia in 1970, the first six month course for orientation and mobility instructors began in July 1971 at the National Guide Dog and Mobility Center, Kew, Victoria. Two American instructors, Rod Kossick and Jim Liska, were recruited to run the pilot project for one year, possibly two. Six students were enrolled, all of whom had been working for one of the eighty organizations of, or for the blind. Most of the students had been teaching orientation and mobility, having received their training from a book or on an in-service basis.

The Australian Government funded the project on a dollar for dollar matching grant basis for two and one half years, supposedly with the understanding that Australia would need about twenty O & M instructors to meet the needs of the estimated 26,000 legally blind people. The Australian National Council for the Blind appointed a Management Committee with Mr. J. K. Holdsworth, Director - Royal Guide Dogs for the Blind Associations of Australia, acting as Administrator.

The fifth course started without Rod Kossick, who returned to the U.S., and it was extended to an academic year including ten students. One of the graduates of the first course became a lecturer.

The academic content of the course is primarily handled by outside lecturers from a local university's Education and Psychology Departments. In addition, Mrs. Jo Miller,

Physiotherapist, lectures on Human Movement, which involves child development, posture, gait and remedial aspects of non-visual locomotion.

There are now 31 graduates from the Australian program, and two are working overseas - India and New Zealand. A total of 35 qualified O & M instructors are working throughout the country in all six States, except Tasmania.

Because of the new Labour Government's introduction of a more socialized ideology, the future of O & M instructor training looks bright. While at present all instructors are working for voluntary organizations, or in a few government sponsored schools for the visually handicapped, there is a strong possibility that Government rehabilitation centers and community health centers will soon consider employing O & M graduates. This would eventuate because the current enrollment policy is to give preference to candidates with a teaching or therapy qualifications.

The main problem factor facing the development of the profession, is society's expectation level of visually impaired people. The caring attitude is, however, slowly giving way to the restorative attitude, and many more blind and low vision people are taking an active role in community affairs.

Australia is also a highly motorized country with often little consideration given to pedestrians. An example of this is the 35 m.p.h. speed limit in residential areas, which often becomes 50 m.p.h. Mass communication media is used frequently to educate drivers and pedestrians. A lack of expressways, coupled with high powered vehicles, tends to create frustrated driving habits characteristic of dare-devil exhibitions.

The emphasis on the white cane panacea is beginning to alter with notable groups such as the White Cane Committee endorsing the need for qualified mobility instruction.

Several tertiary bodies, such as Universities and Colleges of Advanced Education are involved in negotiations with the Orientation and Mobility School in considering the feasibility of incorporating the course into one of their programs.

Meanwhile, the Government has terminated its original grant and is considering a new funding proposal. To cover the gap the National Guide Dog and Mobility Center is underwriting the 1975 course, which has six students.

In an attempt to estimate the manpower requirements of orientation and mobility instructors in Australia, the author now believes that for the job to be done properly a workforce of two hundred is needed. Here's to the future.

ORIENTATION AND MOBILITY IN HONG KONG

Martin Yablonski, Supervisor, O & M Training Program, The Hong Kong Society for the Blind, 33 Granville Road, Kowloon. By the time of publication, the author will have returned to Center for Independent Living, 310 E. 15th Street, N.Y.C., NY 10003.

The Orientation and Mobility Training Program The Hong Kong Society for the Blind initiated a training program for four orientation and mobility instructors on October 15, 1974. Prior to the start of the program, the supervisor had a one month period of time in which to prepare the program which was financed by a grant from the Hong Kong Community Chest. Two of the trainees were sponsored and hired by the Hong Kong Society for the Blind and one each by the Canossa School for the Visually Disabled and the Ebenezer School for the Blind. (A fifth trainee sponsored by the Hong Kong Society for the Blind started on a part time basis on January 13, 1975. Due to her part time status, she received a different program and schedule and this report deals mainly with the four original trainees.

Also, a local school administrator received a thirty hour course in the concepts of orientation and mobility). The training of these four instructors lasted for five and one half months through March 1975. The course was conducted in English with the exception of lectures by local professionals. Presently, the cane is the only available mode of independent travel for the blind in Hong Kong as there are no dog guides in the colony and electronic devices are not yet available. Instruction in cane travel was previously available from two instructors trained in courses sponsored by the American Foundation for Overseas Blind. They have since changed jobs and are no longer teaching O & M.

Traveling in Hong Kong Hong Kong is a very crowded colony of three areas: 1. Hong Kong Island is built around and through hills and on land reclaimed from the sea. It is an urban area with little planning, with streets laid out without any discernable pattern.

The streets and sidewalks are crowded with hawkers, street markets, people upon people and daily changing construction sites. The streets are congested with mini-buses, double decker buses, trams, taxis and private cars. There are few "plus" shaped intersections, relatively few traffic control lights and fewer stop signs. The sidewalks are rough, with sharp inclines and declines, with stairs that seemingly come from nowhere and with fences around corners making proper placement for an independent crossing very difficult for the blind individual.

2. Kowloon is built on more level land but has many of the same travelling difficulties as Hong Kong Island. There are few private homes but rather large, unbelievably crowded apartment buildings with thousands of people streaming in and out. The street markets in Kowloon are crowded with vegetable hawkers, live chickens, butchers, and fruit hawkers as well as the inevitable herd of wandering dogs. The noise of these markets is deafening with the shouts of the hawkers and the screams of the bargaining housewives and servants. In contrast to these street markets are the modern shopping centers and large department stores. The old and the new are practically side by side throughout all of Hong Kong.

3. The New Territories is a farming region with no sidewalks and few clues with which to remain oriented. It is accessible by bus or train.

The majority of the population in Hong Kong travels on public transportation.

1. Buses, which in general are very old and very crowded:
   a. double deck buses of at least five different styles, with no consistency as to the style of bus used on any one route.
   b. single deck buses.
   c. luxury buses similar to inter-city buses.
   d. public light buses which are fourteen seat vans with no regular schedule and which stop to pick up and drop off passengers by hailing.
2. Trams, which are difficult because most of their waiting platforms are located in the middle of the streets and some of the tram stops do not have waiting platforms:
   a. double deck trams having both a conductor and a driver.
   b. single deck trams having only a conductor aboard (pulled by the double deck trams).
3. Taxis.
4. Ferries which connect Hong Kong Island with Kowloon and the New Territories. They are a daily routine for the mobile person in Hong Kong.

The Orientation and Mobility Training Program All of the previously mentioned travelling difficulties had to be built into the orientation and mobility training program, consisting of the following five stages: 1) Protective skills; 2) Indoor Travel; 3) Basic travel in an outdoor environment; 4) Advanced travel in an outdoor environment; 5) Business travel and public transportation.

Throughout the program the principles of orientation and mobility (i.e., safety, control, and the development of a system) were emphasized. In order to adapt an orientation and mobility program to Hong Kong, the following modifications were made.

1. The training program was task oriented rather than being planned around environmental situations. This was done to allow for the flexibility and proving of the techniques. The principles involved in the residential phase of training were taught in terms of tasks which were then applicable to any environment.

2. The program had a greater emphasis on crowd travel.

3. The program included additional work on walking on steep inclines and declines; this was due to the physical contour of Hong Kong Island.

4. The program also had a greater emphasis on traffic analysis. The traffic patterns in Hong Kong are inconsistent and the controls or lack of controls make it difficult for a blind person to negotiate street crossings independently. In order for the trainee/blind person to be able to determine whether he is able to cross a street independently, he needed concentrated work on developing the ability to analyze traffic patterns.

5. Additional training in the use of the sighted public for assistance was also included in the program for two reasons:

   a. Safety - because of the lack of traffic controls many street crossings require sighted assistance and
   b. Efficiency - because of the lack of order in the street layouts, it is difficult for a blind person to locate an objective without prior familiarization.

6. Instruction in tram, ferry travel and in crossing at "Zebra" crossings was added to the curriculum.

The training program consisted of the following segments:

1. Practicum, including blindfold and observation experiences; projects; part time supervised teaching; and full time supervised teaching.

2. Written work, including a manual and model curriculum.

3. Required readings on blindness in general, sensory psychological aspects of blindness, orientation and mobility, mapping techniques, eye anatomy, eye diseases, low vision, body movement and rehabilitation.

4. Visits to rehabilitation centers, schools for the blind, hotels and homes for the blind and the workshop for the blind.

5. Lectures given by various local professionals on such topics as: Defining Blindness in Hong Kong, Needs of the partially sighted, Education of the Congenitally Blind, The History of the Hong Kong Society for the Blind, The Blindness System in Hong Kong and Rehabilitation of the Adult Blind.

6. Ancillary courses including braille, Cantonese braille, first aid and anatomy and disease of the eye.

Conclusion The training received by the orientation and mobility trainees was complete in terms of the present needs of Hong Kong. Hong Kong is a difficult place for a blind traveller. It presents many confusing situations, but given the definition of an independent traveller as one who is in control of the situation (encompassing the principles of safety, a system and control) it is very possible for a blind person to travel independently in Hong Kong.

ORIENTATION AND MOBILITY IN SOUTH AFRICA

Daniel H. Wood Principal, O & M School, South Africa Guide Dogs Association for the Blind, Cnr. Victoria Ave. and 12th Street, Parkmore, Johannesburg.

In December, 1973, the South Africa Guide Dogs Association for the Blind (S.A.G.A.) initiated the first school for O & M instructors in Africa. The school is located in Johannesburg, which is a large, cosmopolitan city. The social, economic and political systems, were very different from anything I had experienced previously. The "apartheid" or "separate development" system in South Africa has resulted in four fragmented service systems for the blind: European (or White), Coloured, Indian, and Bantu (or African). Services are coordinated by the S.A. National Council for the Blind. The "apartheid" system affects my teaching considerably, as the O & M program includes students from all racial groups. For example, my non-white students must travel on separate busses and cannot eat in the same restaurants as I do. Fortunately, many of the "apartheid" laws are now disappearing in South Africa.

Prior to the initiation of the O & M School in 1973, mobility instruction in South Africa was conducted only by two part-time instructors (taught in England) and S.A.G.A. The Guide-Dogs Association realized that mobility instruction must be available to the over 20,000 registered blind in South Africa and initiated a six month course for O & M instructors, which is free of charge to any organization sponsoring a trainee. The first class of trainee-instructors consisted of an Indian, a Coloured and two White students, who are all now working throughout the Republic. The course consists of the following eight courses:

Orientation & Mobility Practicum - blindfold experience
Orientation & Mobility Theory
Anatomy of the Eye
Medical Aspects of Rehabilitation
Human Senses
Attitudes Towards the Blind
Learning and Teaching
Seminar and Visitations

The eye and medical aspects courses are taught by physicians.

The second phase consists of independent study resulting in a professional paper, and internship involving full-time teaching at each trainee-instructor's own agency. For this three month period I spend one week a month with each trainee.

The second class of trainees-instructors will complete their instruction in September. The next class will be for Bantu (African) instructors. Because they are from an entirely different educational and cultural background, a separate course will be developed for them. Representatives of the Department of Bantu Education have asked that five teachers be trained in O & M. These teachers will teach O & M in the five schools for the Bantu blind in South Africa and South West Africa.

The O & M School is the first program in the Republic to train professionals to work with the visually impaired, and it has created a much needed interest in the field. For instance, the courses in the Eye and Medical Aspects will be attended by almost all of the social workers dealing with the blind in Johannesburg, and a major university has required the course "Attitudes Towards the Disabled, with Emphasis Towards the Blind" for all first year social work students. I have also arranged for the College of Optometry to supply a free low Vision Clinic for any registered blind individual.

Orientation and mobility has secured a strong foothold in South Africa, and it is hoped that its scope will continue to expand with continued quality.

A LOOK AT SOME APPROACHES TO ORIENTATION AND MOBILITY AT PERKINS

By

Dennis Lolli, Head of the Mobility Department

The Perkins Orientation and Mobility Department has a Head of the Department and eight Orientation and Mobility Specialists. Orientation and Mobility has been in existence for over fifteen years at Perkins (starting with a part-time "cane travel" teacher). All members of the Department are certified Orientation and Mobility Specialists with Masters' Degrees. The Department has more than doubled in size in the past five years. In its earlier stages, our program dealt mainly with the older high school students. We, therefore, were providing training for those with the most immediate needs. Within the past few years we began evolving into a more far-reaching program, branching into the areas of Lower School (elementary), a population of deaf-blind students, and to the young adult rehabilitation students on campus. Underlying work with these different populations was an increased involvement with low-vision training, evaluation, and utilization.

Before going further, let's describe the shift in the school's population. With the end of the retrolental fibroplasia (RLF) wave in the early 1950's and the influence of Massachusetts State Law, Chapter 766 (which attempts to educate as many handicapped children as possible in their local communities), the number of singularly handicapped students attending the school was reduced substantially. Occurring between these two events was the rubella epidemic of the early 1960's. Estimates are that approximately 5,000 children were born in this epidemic who have been classified as deaf-blind.[1] Numerically, the school population is about 260, which roughly is broken down as follows:

Upper School - 70
Deaf-Blind - 80
Lower School - 80
Young Adults - 30

The majority of students in the first three groups are moderately handicapped. This has been an evolving trend for the past few years. In addition, educators of the blind were discovering that a large number of these students were not adequately trained in the areas of preparation-for-life skills for their personal and vocational needs.

With the change in population occurring, it was apparent that many of our students were having difficulties with a traditional lesson-sequencing approach. For example, students were not able to advance smoothly from lesson four to lesson five. Other factors were surfacing as important to a meaningful presentation of training skills, such as prior student exposure, student identified needs, student identified goals, readiness levels (physically, emotionally and educationally), peer influence and parent involvement. Therefore, we felt it necessary to review our training format in order to accommodate these factors. As a result, we found that the prime emphasis should remain on skills, and location of the training session should not be a controlling factor. That is:

1. We should deal with the developmental presentation of specific skills.

2. The students' motivation and readiness must be dealt with on an individual and indepth basis.

3. There should be accurate, realistic, and ongoing assessments of the students' abilities, limitations, and needs.

4. We and the student should not be as concerned with where we are working as what we are working on.

5. Ongoing evaluations should be kept according to the breakdown of skills attained and those skills currently not attained.[2]

We recognize that these points are common procedure, however, it becomes imperative that they be followed carefully when dealing with the multihandicapped student/client.

This was an initial adjustment made by the Orientation and Mobility Specialists at Perkins to allow for more meaningful programming. Some of the additional modifications in approach which have arisen out of this belief are as follows:

1. Establishing a Lower School Program[3] - This program was formed specifically for the population and school structure at Perkins and, therefore, may not be the best possibility for other locations. It is, however, recognized by Perkins that the multihandicapped child has needs which demand early intervention and training.

While we do not have a program for pre-school intervention, we recognize that it is to the benefit of both child and parents that services start at the earliest ages possible. Many times this would be in the form of parent counseling to lay the groundwork for the child to mature with.

An Orientation and Mobility Specialist cannot effectively do the job alone. If those who work with the student in various capacities do not work together, then the progress of the student will be limited. Below is a general outline of our program.

IDENTIFICATION OF STUDENTS

a. Immediate needs are handled on an individual basis. Students new to the school receive familiarizations. This year two students have been cleared to travel independently to a neighborhood public school and receive a portion of their education there.

b. Groupings (homogeneous in Orientation and Mobility abilities) for instruction, group work, field trips, etc. (Environmental Awareness Groups).

c. Evaluation - All pre-kindergarten and kindergarten students are evaluated and taught by an Orientation and Mobility Specialist.

IDENTIFICATION OF NEEDS - Individual and groups are determined by observation and consultation with the classroom teacher, physical educator and physical therapist, psychologists, etc. Also, there are student staffings (approximately three per week throughout the school year) at which time needs are identified and program recommendations made.

On a group basis, the personalities of the individual students must be determined through consultation with classroom teachers. Activities and conceptual work must be geared to the age level with consideration of additional problems such as language development, learning disabilities, emotional disturbance, and/or physical problems in addition to vision.

INDIVIDUAL PROGRAMMING - The needs (conceptual, experiential, spatial orientation, motor development, regular developmental, etc.) of the individual student having been identified, the instructor plans lessons to begin fulfilling the needs. Results, attitudes, materials, resources, etc. must be recorded and evaluated as to their value, effectiveness, adaptability, and usefulness at various levels. Hopefully, this process ends with an identification of material which has proved meaningful to the student.

GROUP PROGRAMMING - Two approaches

a. The Orientation and Mobility instructor serves as a consultant to the classroom teacher. (This has been found to be a beneficial introductory step into the discipline of Orientation and Mobility for many classroom teachers also).

b. The Orientation and Mobility instructor may conduct the training session personally.

Obviously, the use of one approach with a particular group does not preclude the use of the other. Regardless of the approach taken, it is imperative that the instructor and classroom teacher meet on a regular basis to provide reinforcement in classroom, cottage and social activities.

2. Deaf-Blind - We have found that in forming a program for the deaf-blind population, the general format of observation-consultation-identification is useful and have modified it only slightly. The term deaf-blind does not necessarily mean that a person has no useable vision and/or hearing. In fact, the major percentage of the deaf-blind population has some residual hearing and/or vision. Perhaps one of the most glaring modifications in working with the deaf-blind is the time involved to communicate. All Orientation and Mobility instructors who are working with these students at Perkins, therefore, have received formal training in fingerspelling and signing to communicate as effectively as possible with each student.

Generally, the format used in the Lower School is workable with the deaf-blind students, although their handicaps may be more extensive. Therefore, in these situations the Orientation and Mobility Specialist's role is one of consultant, teacher, co-worker, aide and perhaps more. One of the first steps any Orientation and Mobility person should take is to know the staff in the particular setting. This can then be carried further into what courses/resources are available. Training can then be set up in conjunction with classroom teachers and/or related specialists. Without a well organized team approach, the goal of preparing the multihandicapped child becomes a defeated proposition.

3. Combined Lessons - For a number of reasons (reducing a student embarrassment, fostering skills needed when traveling together, learning the need for accurate communication, enjoyment of travel, etc.) we have found it valuable to conduct lessons for two students working on similar skills in a combined fashion. This can be through each student's planning a different route to a common location and then traveling the same return route together. Another example would be having an experienced business traveler discuss and then show a beginning business traveler some of the locations and skills used within an area. This can also be a good source of student motivation and respect of each other's abilities. The variations of this type of lesson, however, are too many to list. One generality (and exceptions to this are realized) is that usually

students who are at the same functioning level work best with this type of training. Obviously, a student would spend only a segment of his/her lessons in this format as the majority of training does occur with a one-to-one ratio and at his/her most suitable learning rate.

These are a few of the general modifications/approaches we have found appropriate for our students. The Department has also become involved with low vision on an extensive level and has compiled a booklet entitled "Mobility for the Partially Sighted" by Kathy Morse and Kevin Lessard. The philosophy at the Department is to attempt to work with each student as an individual in presenting realistic training experiences that will be beneficial to the student's lifestyle.

It is our commitment that the multihandicapped student/client can benefit greatly from Orientation and Mobility training. Rote travel,for many of these individuals, can represent an important achievement which signifies success in its truest form.

Those in the Department are:

Dennis Lolli,	Head
Dawn Blue,	Instructor
Lorraine Bruns,	Instructor
Scott Bryson,	Instructor
Margaret Dwyer,	Instructor
Hera Goodrich,	Instructor
Gayla McClain,	Instructor
Carol Macknin,	Instructor
Kathy Morse,	Instructor

References:

1) Sherrick, Carl - 1980 Is Now, Los Angeles: John Tracy Clinic, 1975, p. 65.
2) Orientation and Mobility Department Memo, Perkins School for the Blind, Watertown, Massachusetts, 1972.
3) Bryson, Scott; Lessard, Kevin; Macknin, Carol; Orientation and Mobility Lower School Program, Perkins School for the Blind, Watertown, Massachusetts, 1974.

LASER CANE UPDATE

By

Daniel N. Head

The term "Laser Cane" first crept into the vocabulary of Orientation and Mobility Specialists in the late 1960's with the introduction of the Bionic

C-4 Laser Cane. With the exception of a handful of Orientation and Mobility Specialists working with the Veterans Administration and a few selected mobility specialists across the country, the Laser Cane has, for the most part, remained a mystery until the very recent past.

It was not until the fall of 1974, when a final production model of the Laser Cane, Model C-5, was introduced, that a concerted effort was made--jointly through the Veterans Administration, Western Michigan University, and the maker of the Laser Cane, Bionic Instruments, Inc.--to inform mobility specialists about the advantages and ramifications of electronic mobility devices in general. This joint effort culminated in the initiation of a specific training program for the indoctrination of certified Orientation and Mobility Specialists to the training procedures with electronic travel aids. The training of seventy-one Orientation and Mobility Specialists in the use of the approved electronic aids has been accomplished in the past year through Western Michigan University (training sixty-five) and Boston College (training six). These approved aids are the Lindsay Russel Pathsounder, the Kay Sonic Guide, and the Bionic (Benjamin-Meeks-Ali) Laser Cane, Model C-5.

Even with the training provided by two university graduate centers there are still numerous Orientation and Mobility S pecialists in the field whose knowledge of the Laser Cane stems from the early C-4 model of the device. Fortunately, the only similarities between the C-4 model Laser Cane and the current C-5 model are in the descriptive use of the term "Laser Cane" in naming the devices! The changes that have taken place since the appearance of the first Model C-4 are so numerous as to make the C-5 Laser Cane almost unrecognizable in comparison with the C-4. These changes are due largely to the reception and integration by the designers of input from those users and mobility specialists who were exposed to the early C-4 device.

From this input it became clear that the initial C-4's were too heavy and bulky and that their performance and reliability were not what the mobility community could accept from mobility devices. The major mechanical changes that came from this input include lightening the Model C-5 by nine ounces in comparison with its predecessor and lessening its diameter at the grip by one-quarter of an inch.

Among the other changes that did not affect the physical appearance of the device, but rather, improved its performance, was a significant improvement in the performance of the "DOWN" channel. The laser firing rate was also doubled from forty pulses per second to eighty pulses per second. This change theoretically doubles the user's chance of detecting obstacles in his travel path.

The protection ranges and audio tone outputs have also been standardized with the C-5 model Laser Cane. The current protection ranges are 30" from the cane tip for the high beam; 12 feet for the far range mid-beam; 5 feet for the near range mid-beam; and 36" from the cane tip for the detection of drop-offs.

The auditory output signals are displayed at 2600 Hz for the high signal, 1600 Hz for the mid-beam, and 200 Hz, harmonically enriched, for the drop-off signal.

Additionally, there have been changes in switch placement and switching function from the early Model C-4 (and even from the earliest Model C-5) to the current production models of the C-5.

The major differences between the C-4 and C-5 models go beyond the outward appearance of the two devices and are concentrated in the internal circuitry. The circuitry patterns and internal components used within the Laser Cane have been redesigned and greatly modified since the first C-4 Laser Cane appeared. These circuitry changes have all been geared to the improvement of the performance, durability, and reliability of the C-5 model Laser Cane.

To date, one hundred and fifty-two Model C-5 Laser Canes have been produced. The Veterans Administration has purchased ninety of these canes and Western Michigan University has obtained twelve, while fifty Laser Canes have been produced for sale to non-VA centers and individuals for whom certified instruction is available. Half of these fifty canes produced for non-VA sale have already been sold and distributed for use by individuals or agencies in the states of Pennsylvania, New Jersey, Illinois, Michigan, South Dakota, Hawaii, Oregon, South Carolina, New York, Wisconsin, and Georgia - - eleven states in all. Approximately fifteen users have been trained by the Veterans Administration and are currently using the Laser Cane in everyday mobility situations. Additionally, three non-veteran users have been trained with the C-5 model Laser Cane by certified instructors in the field. An unknown, but larger, number of blind have been evaluated with the Laser Cane and chose not to use an electronic mobility device, selected an alternate mobility aid, or were not thought qualified to become users.

This first year of use of electronic mobility devices has contributed to a new and expanding body of knowledge in the field of Orientation and Mobility. There is now overwhelming evidence that Orientation and Mobility Specialists definitely require the six-week exposure to the new electronic devices in order to competently explore training procedures and to pursue potential uses of the new devices.

Early reactions from the blind have also been favorable towards their exposure to one or another of the electronic devices. Comments from blind users have ranged from positive statements about "improved mobility" to remarks concerning the Laser Cane (or other device) aiding in the development of new or additional "self-worth" and "self-esteem."

It is also apparent after the first full year of electronic mobility that many difficulties surround agencies which are seeking means of financing the orientation and mobility training program for its instructors and the subsequent purchases of electronic mobility devices for their clients. Financial aid has, thus far, been very slow to materialize. However, as more blind are exposed to the electronic travel devices and as more concrete information is derived regarding the benefits of the new travel aids, it is expected that agencies serving the blind will become more willing to earmark funds for this type of new and innovative program within the framework of rehabilitation.

Yet to be accomplished are 1) a long-term evaluation of the electronic devices, 2) the determination of who among the blind will most benefit from their use, and 3) situations where such aids offer the most benefit to travelers.

The training of a greater number of Orientation and Mobility Specialists through the Electronic Mobility Programs also remains to be accomplished fully. Currently, trained mobility specialists (in the electronic travel devices) are concentrated, with fifty-three in the Eastern States and only eighteen in

the Western States. Until these two figures increase dramatically and reach a more equitable proportion, a large segment of the blind population will find electronic mobility aids unavailable to them for lack of local instructors.

Currently, the cost of electronic aids is high--approximately $2,000 for each of the three main electronic devices. This high cost raises many serious questions in the minds of budget-minded administrators. Notwithstanding such costs, the new electronic mobility aids have now clearly shown themselves to have real merit. They will thus be a part of work for the blind from now on. Appropriate steps should be taken by administrators and Orientation and Mobility Specialists to insure that they are properly prepared and willing to maintain their high standards of leadership in the ever-expanding field of work for the blind.

REALISTIC ORIENTATION AND MOBILITY FOR THE ELDERLY BLIND PERSON

By

William E. Allen, Anne A. Griffith, Martin S. Yablonski

The New York Infirmary/Center for Independent Living is a comprehensive rehabilitation center whose students are individuals legally blind and 55 years old or older. The Center for Independent Living (C.I.L.) was established three years ago with the belief that the student determines the direction and component of his rehabilitation program according to his personal needs. That is, when the student arrives he will express his rehabilitation needs and these needs will be the basis for his instruction. These needs become his goals and these goals are achieved through a highly individualized and interdisciplinary approach.

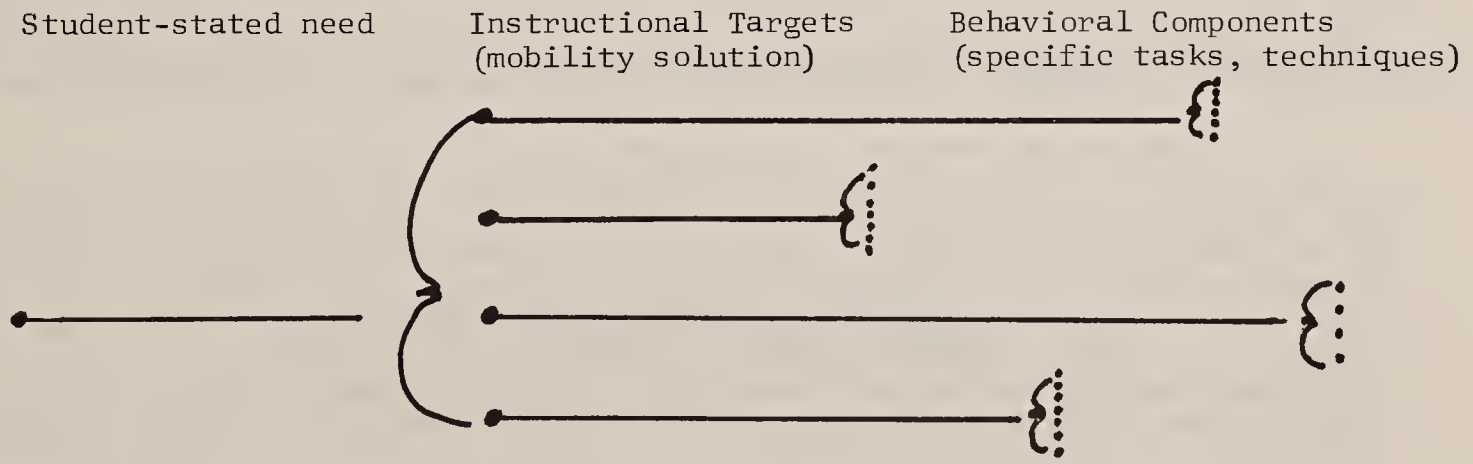
The concept of student-stated goals has many implications in a rehabilitation program. The student-oriented program required that the instructors and students be keenly aware of the student's curriculum, its rationale and its components with the instructor ready to restate the curriculum in terms of student-stated needs. This approach necessitates the student's awareness of what is involved in a total program as well as in each subject area so that he may intelligently select those parts leading toward completion of his self-set goals. A delightful result of this approach for the student is that the major portion of the rehabilitation program responsibility in terms of monitoring rests with the student. This offers an added feeling of freedom and control to discuss and change a program at any time.

Experience within this approach has shown that the occurance of blindness is looked on by many students as an interruption in a well-established life pattern. As a result most individuals wish simply to return to their regulated

life pattern with as little change as possible. It is through this concept of student-stated goals and the common desire to continue with a set life pattern that the impact of the CIL's philosophy is felt on the orientation and mobility instruction.

The individual who decides to enter CIL usually has many needs that must be answered to regain independence. They oftentimes have many established ideas as to what they want stemming from the facts that they have established a definite desired life pattern and know exactly what they like and dislike. This causes a good deal of excitement and work for the instructors as they have to know how to redefine the student's stated needs to specific and justifiable orientation and mobility needs. Upon examination of all variables dealing with goal setting the mobility instructor and the student literally write a course prescription. The questions posed to the student deal with what they like to do, how blindness has inconvenienced them and what can the orientation and mobility instructor do to assist in achievement of desired goals. At this stage in an orientation and mobility course, the instructor may have to discuss at length with the student why so much of the responsibility is the student's. Most students will agree with these in theory but to be the decision-maker and follow them through is usually a first for any of our students as far as their educational experiences are concerned. This concept of the use of life patterns in establishing student goals at CIL can not be overly emphasized as it is the essential difference between orientation and mobility programs with other age populations and the orientation and mobility program at the New York Infirmary/Center for Independent Living.

As orientation and mobility instructors we are attempting to present a comprehensive and systematic mobility program which can be understood and monitored by the student. When a student states a travel need we analyze that travel need and redefine it for ourselves into instructional targets (i.e., mobility solutions). These targets, of which we presently have 24, are basically separate, distinct teaching units. These targets are used for both reporting and monitoring progress. We are presently attempting to break down each of these instructional targets into distinct behavioral components. These behavioral components would be the specific tasks and techniques involved. A schematic explanation follows:



For each student's stated need there could be a different target or sets of targets and consequently different behavioral components. It is through this individualized method that we develop the prescription for each student's orientation and mobility program.

While in our rehabilitation program the student is able to monitor his progress by being involved in every decision made concerning his program. Students attend and participate in every decision making meeting. These meetings, referred to as staffings, include the evaluation staffing, the monthly review staffings and the graduation staffing. Students are encouraged to invite family members and friends to attend these staffings. It is hoped that through family involvement now, family support will continue upon graduation. All reports and written material are shared with and in most cases written with the participation of the student prior to their staffings. All of the above is true for all subject areas at C.I.L.

Given the definition that orientation and mobility training is the development of a system allowing a visually impaired individual to control his movements within an environment to ensure maximum safety, cane techniques have not proven to be a problem. Technique modifications do force the instructor to be flexible as well as forcing the instructor to analyze all the components of the technique so that he can safely adapt as need be. We utilize the Typhlo cane, the Mahler heavy duty collapsible, the Hycor autosupport cane and the Hycor autofold. However, on student request we have taught with a white wooden cane. We are also presently planning to investigate the use of the fiberglass cane specifically for our students with impaired feeling in their fingers.

Many of the problems we have in dealing with this age group are health related. Because of the age range of our population, we expect and find many additional medical problems. Some of the more common health disorders are advanced diabetes and related ailments, osteoarthritis, emphysema, high blood pressure, artereosclerosis, aneuryism, amputation, heart problems, foot problems and organic brain disorder. Hearing losses are also a major and common concern. Included in every student's initial evaluation is an audiological examination. The results have shown that most of our students have some degree of hearing loss due to many factors. As one would expect the hearing losses have a great effect on the student's ability to discriminate, localize and utilize sounds. This requires a greater emphasis on the use of sighted assistance in their training. Many students receive hearing aids while enrolled in the CIL program. They then have the added difficulty of re-adjusting to their new hearing while learning how to use the aids. This difficulty is dealt with by our sensory development instructor in conjunction with the orientation and mobility instructor.

Similar to the national population of the visually impaired the majority of our students have some degree of residual vision. We emphasize the use of this residual vision in conjunction with the low vision distance aids prescribed by our consulting specialist. The students in many cases resist this attempt to maximize use of their residual vision. This resistance generally takes three forms: one being the attitude, both realistic and unrealistic in that they are going to lose their residual vision so therefore should learn as a totally blind individual; another being the inability to coordinate their residual vision with the use of their other senses; and, finally, many students find adapting to the new method of traveling with the low vision aids too difficult and tedious.

Many of our students have been physically dormant for some time and are not able to stand the rigor of attending a rehabilitation center or be involved in an orientation and mobility program. This causes the initial lessons to be shortened. Many lessons start with a cup of coffee, not so much for socializing purposes but for "reving" the student. Eventually the student and instructor are able to work up to the usual forty-minute lesson. Diabetics often have a serious problem with the increased activity. The physical dormance has caused movements to become rigid as manifested in many types of body movement control difficulties. To combat this we have a body movement instructor who is specially trained to deal with the problems of this age group. These problems should not be under-estimated as they are the same type found in other adventitiously blinded age groups but are aggravated by our students' age. Another problem of this type is the frequent stated attitude by our students that they are too old to learn. This is difficult to combat and one approach is to demonstrate progress through our student oriented and monitored program. The CIL monitoring system affords the student the opportunity of daily and periodic self-evaluation.

To deal with these problems, we are fortunate to have the total rehabilitation process and personnel to assist the orientation and mobility instructor. At CIL we have the casework and psychological services to assist with the psychosocial problems, a staff of medical consultants to handle medical problems, a body movement instructor to assist with alleviating the rigid movements and a sensory development instructor. Our sensory development instructor works in conjunction with the orientation and mobility instructors to compliment training by intensifying work in any area that is found insufficient in orientation and mobility. It should not be thought that sensory development is only a part of orientation and mobility. It is an entire course unto itself and deals with many areas that orientation and mobility instructors do not deal with directly.

Orientation and Mobility instruction at the Center for Independent Living is in essence no different than instruction with any other age group. We teach the same safety skills, the same movement techniques and attempt to develop the same orientation logic. The differences are in the attitudes towards and the respect of the individuals involved. With an older blind person, whose life pattern is set, the orientation and mobility program compliments, respects and works within the framework of that life pattern. Many times to do this some refinements of orientation and mobility training might have to be cut away. This process often causes instructor frustration, but it is necessary to present a reality based and prescribed program which satisfies the self-stated needs of the student and recognizes their right to self-determination.

A GUIDE DOG* INSTRUCTOR'S VIEWS MOBILITY: AN INTERDISCIPLINARY SERVICE

By

David L. Keith
Licensed Guide Dog Instructor and Graduate Mobility Specialist
GUIDE DOGS FOR THE BLIND, INC.

Many visually handicapped persons today are able to get about more independently in their environment through the use of either the Long Cane or the Dog Guide, or both. Instruction in the use of these mobility aids has reached a high level of competency and proficiency in recent years with the development of specialized professional training programs for O & M Instructors and Dog Guide Instructors.

In earlier years much dichotomy existed between the two disciplines, largely due to ignorance and lack of communication. But with the growth of professionalism in the field and an awareness of their common goal, both the O & M Instructors and Guide Dog Instructors have sought to become better informed in the allied discipline and to establish better communication and exchange of ideas. This spirit of cooperation and greater understanding between the two disciplines can only lead to improved mobility services for the visually handicapped.

As an example of this increasing trend toward an interdisciplinary service, I have been asked, as representative of a Dog Guide school, to give guidelines to O & M Instructors on how best to render assistance to our graduates, if requested; or if such assistance should be attempted at all by an O & M Instructor.

Our organization welcomes and encourages the assistance O & M Instructors can give to our graduates in their local areas, and considers O & M Instructors very well qualified to assist Guide Dog users in orientation to unfamiliar areas, such as college campuses, vocational training centers, new routes, shopping centers, public transportation, etc., so long as they do not attempt to interfere with the Guide Dog's or the master's method of working.

The Long Cane traveler must be oriented to a travel area in order to travel effectively, using all cues and landmarks available to insure proper position and progress to a destination. So, too, must a Guide Dog traveler be oriented (not the Guide Dog, as some believe) in order to travel effectively; and, too, must utilize all cues and landmarks available.

Generally speaking, the cues and landmarks available to a Guide Dog traveler are fewer than those available to Long Cane travelers, especially the tactually-contacted obstacles and "shorelines" useful to Long Cane travelers, but avoided by the Guide Dog. However, the dog's movements to avoid these obstacles or shorelines may serve as cues, if described by the Instructor. Other cues, auditory, olfactory, kinesthetic and "under-foot" tactual can be just as valuable and available to Guide Dog travelers as to Long Cane travelers. Additionally, use of tactual and auditory maps, compass directions, terms of left and right, parallel and perpendicular, may all be useful to Guide Dog users as to Long Cane users. The important thing is to assist the traveler in developing the best concept possible, according to his individual ability, of his travel area.

As the Guide Dog team (master and dog) will travel more effectively if the master has been previously oriented to the travel area, it is advisable to instruct the person initially without his Guide Dog, if agreeable to him, either with the Long Cane, if he has this skill (which many Guide Dog users have) or by Sighted Guide. In this way, orientation instruction can be given in the same manner as with Long Cane clients, but with emphasis on cues and landmarks described previously as being more useful in Guide Dog travel. Following this, the team could then work the same area with the Instructor following as observer, informing the person of any errors in direction his Guide Dog might be making, turns to be made, etc. In some instances, the Guide Dog user may need specific information, such as location of a bus stop, a mailbox, or the point in a very-rounded corner which he would be best positioned for crossing the street so that he could direct his dog to that point.

It is not the intent of this paper to teach O & M Instructors to be Guide Dog Instructors, but merely to suggest some guidelines for giving orientation assistance to a Guide Dog traveler; which in my opinion, an O & M Instructor by his orientation training background is well qualified to give. But it should be stressed as well that observed working or behavioral problems of the Guide Dog would be beyond the scope of the O & M Instructor's skills to correct; and therefore should be brought to the attention of the Guide Dog user and/or our organization for correction. This organization maintains a Follow-Up service to all our graduates, and is readily available for this type of assistance.

Most Instructors today, both O & M and Dog Guide, recognize as our mutual goal the most effective mobility for each visually handicapped person, which for some is achieved by the Long Cane, for others the Dog Guide, and for yet others the Sighted Guide. Many factors determine this, the blind person's preference, life style, abilities and limitations. Guide Dog Instructors fully appreciate the importance of basic orientation and mobility training as prerequisite to Dog Guide training, strongly urge applicants to avail themselves of such O & M training prior to Guide Dog training, and welcome input from O & M Instructors whose previous clients have made applicant for Guide Dog training. It is by such cooperative interdisciplinary approaches to mobility services as I have described that our clients can best be served.

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*GUIDE DOG refers to one dog guide training school, GUIDE DOGS for the BLIND, INC., San Rafael, California. The author does not presume to be spokesman for all dog guide training schools, and welcomes views from other training schools.

A NIGHT VISION AID FOR VICTIMS OF RETINITIS PIGMENTOSA

By

Paul E. Lighty

(The following is a synopsis of a lecture-demonstration presented to the Orientation and Mobility Interest Group of the American Association of Workers for the Blind; Atlanta, Georgia, July 22, 1975, by Paul E. Lighty, Program Manager, Night Vision Aids, International Telephone & Telegraph Corp.)

The ITT Night Vision Device is a form of light amplifier. By its use, a person with normal sight is able to see quite clearly, scenes illuminated by starlight or moonlight, with the unadapted eye.

It was determined by Dr. E. Berson and co-workers at Harvard Medical School that this device would be useful for many victims of retinitis pigmentosa

who still retain useful daytime vision, since dimly illuminated scenes are amplified to levels above their thresholds.

The night vision instruments were originally developed by ITT for the U.S. Army, with the support of its Night Vision Laboratory. The military uses were primarily in surveillance and rescue operations where the devices were employed as binocular goggles.

Through the efforts of Dr. Berson and the National Retinitis Pigmentosa Foundation, International Telephone & Telegraph Corporation became aware of this beneficent use of the light amplifiers and offered to assist in making a suitable version available to victims of R.P.

Currently produced models are not suitable for general use because of their extremely high cost, their size, weight and inconvenient adjustments. Realizing that these factors would prevent many R.P. victims from obtaining and using these aids, ITT undertook to develop a special model for these persons, which would be convenient to use, unobtrusive in appearance and which would be distributed through ethical channels at the lowest cost consistent with high quality.

The design of the model has been completed (it was shown during this lecture) and two handmade prototypes produced. Because of inflationary factors and supply problems, we have been disappointed in the cost of producing the medical pocketscope which at an initial (no profit) price of $3,500, is still less than half of the military version. The new pocketscope will be distributed through the National Retinitis Pigmentosa Foundation, upon the recommendation and prescription of a doctor.

A small number will be produced before the end of this year, and quantities will increase somewhat thereafter; the number will be determined by availability of certain critical components which we must obtain from other sources. For the foreseeable future, all medical pocketscopes will be distributed for the benefit of the partially sighted, by the channels mentioned above.

(Following the lecture, there was a question and answer period, and two models of night vision devices were demonstrated.)

APPENDIX

The following list includes most of the key articles that have appeared in past issues of the Long Cane News.

LIST OF ARTICLES - THE LONG CANE NEWS

Vol. I, No. 1

"Specifications for the Long Cane," Russell C. Williams, V.A.
"The Long Cane," George Ossentjuk
"Mobility Interest Group," Rod Kossick

Vol. I, No. 2

"Basic Concepts of Blind Children As They Relate to Problems of Orientation and Mobility"
"Presenting an Orientation and Mobility Program to the Administration"
"Orientation and Mobility In-Service Training Program"
"Stress in the Rehabilitation Process," Leo H. Riley, M.D.
"Unique Center for Geriatric Blind," (Catholic Guild for all the Blind)
"The Canemaker," Jan L. Winans

Vol. I, No. 3

"Residential School Mobility, The Lower School" Katherine M. Reilly
"A Study on the Use of Occluders with Partially Sighted"
"The Resource Teachers Welcome the O & M Men"
"Teachers of Orientation and Mobility" (Questionnaire)

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